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BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

EDITED BY

DR. JEFFERY G. HARRISON

Volume 76

1956

PRICE TWO SHILLINGS AND SIXPENCE

PREFACE

EIGHT MEETINGS of the Club were held in 1956, the May meeting being cancelled owing to unavoidable circumstances. Nine numbers of the BULLETIN were issued as usual and this volume contains 160 pages, including three four-page inserts of art paper for photographic reproductions. Volume 76 is therefore the largest since before the last war and represents the target which the Committee has been striving to achieve in its efforts to improve the BULLETIN.

It is most gratifying that the support of contributors has enabled the BULLETIN to be built up in this way and at the time of writing the supply of papers is satisfactory and there is a short waiting list of approximately five months. In order to maintain the BULLETIN in its present state, the urgent need now is to increase the number of subscribers and it is to be hoped that everyone, whether contributors or not, will do their best to bring this about.

The Editor would like to thank all those who have helped him during the past year. Mr. C. N. Walter has once again prepared the List of Authors. This year a separate list of the newly described forms has also been prepared to ensure that their descriptions are not overlooked by abstractors and for easier reference. The publication of a full scientific index with each volume is beyond the finances of the Club at present.

The numbers attending the meetings for the year were as follows: Members of the Club, 272; Members of the B.O.U., 40; Guests, 112; Guests of the Club, Mr. and Mrs. R. Darnton, Mr. I. C. T. Galbraith, Dr. A. McDiarmid; Total, 428.

JEFFERY HARRISON.

Sevenoaks, December 1956.

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CORRIGENDA, Volume 76

p. 33, line 36, *for* J. H. Beesley read J. S. S. Beesley.
p. 108, line 2, *for* J. H. Beesley read J. S. S. Beesley.

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BULLETIN
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The five hundred and forty-fourth meeting was held at the Rembrandt Hotel, South Kensington, on Tuesday, 13th December, 1955, following a dinner at 6.30 p.m.

Chairman: COLONEL MEINERTZHAGEN

Members present: 39; Guests 14; Total: 53.

The Chairman welcomed Messieurs Etchécopar and Hüe from France and Dr. Taylor from the U.S.A.

A Redshank in Summer Plumage in Winter

Dr. Jeffery Harrison exhibited on behalf of Dr. James M. Harrison and himself an Icelandic Redshank ♀ which had been collected on the Medway Estuary, Kent on 9th November 1955 and which was in advanced, freshly moulted summer plumage.

The bird was exhibited in view of the report in *The Times* (10.12.1955) that Mr. John Williams had found similar examples in Siberian nesting species on their return to Kenya this winter, the question of whether radioactivity could account for this phenomenon having been raised. A paper on this bird will appear in a later Bulletin.

The Birds of West Africa

Dr. William Serle spoke of the birds of eastern Nigeria and gave an entertaining account of the early history of ornithology in the area, which was initiated by Royal Naval personnel on Niger River expeditions, the names of Allen, Fraser and Thompson being prominent among the early explorers. Their courage is reflected in the fact that there was a 30% mortality on these early trips, due largely it seemed to somewhat misguided medical advice. In 1886 Hartert was one of the first to ascend the Niger and return fit. Although much excellent material had been collected, the data was far from accurate and other collections had never been properly examined and were now dispersed. This resulted in many difficulties for the systematist.

Dr. Serle exhibited a number of eggs and birds, and several papers will be appearing in subsequent Bulletins.

The Birds of Greenland

Colonel Meinertzhagen showed coloured slides taken on his recent expedition to Greenland. Most were scenic or floral, the flowers being demonstrated by Dr. Melderis, but the birds included a fine study of a drake King Eider. A paper on the birds will appear later. Mr. Russell Webbe showed slides taken both in Spitzbergen and east Greenland while ringing Pink-footed, Barnacle and Brent Geese. Excellent pictures were seen of all three species and the results of the Spitzbergen expedition have already proved the origin of the western European (as distinct from the British) populations of the Pink-footed Goose.

Notes on African Larks — Part I

by Mr. C. M. N. White

Received 29th August, 1955.

The following notes dealing with certain species of the genus *Mirafra* are the first part of a number of such studies of African larks. The genus *Mirafra* contains a rather diverse assemblage of species which fall into several well marked groups. The genus is characterised by its exposed nostrils and well developed outer primary. As I pointed out in The Ibis: 1953. 687–89 the line between *Mirafra* and *Certhilauda* is very indistinct and can only be drawn on an arbitrary basis. The following notes deal with the first two of the well defined species groups which I recognise in the African species of *Mirafra.*

1. True *Mirafra:* the genotype is *M. javanica* Horsfield to which I attach the *cantillans* group and *passerina* as discussed below. The extensive white on the outer tail feathers, non-descript sparrowy plumage, small amount of rufous on the outer webs of the primaries and rather stout conical bill characterise this group. The African species are all birds of dry open country with grass and sparse trees. Three African species of very similar general aspect can be assigned to this group.

Mirafra javanica races
„ *cheniana* and *albicauda* superspecies
„ *cordofanica*

All three overlap to some extent in at least part of their ranges, although some ecological separation seems likely to exist. Field studies are badly needed to determine how far these three species exist together, how far their behaviour in the field is distinctive, and how far their apparent close structural relationship is possibly due to convergence or in fact reflects a true phylogenetic relationship.

2. Pipit-like *Mirafra:* comparison of *M.poecilosterna* and *M.gilletti* shows a very close structural relationship and similarity of proportions and size ; in particular the absence of rufous on the wing or white on the tail is noteworthy. I do not suggest that they be regarded as conspecific for more data is needed to show how if at all they meet in southern Somalia but their characters are such as to make it essential to associate them closely in any arrangement of the genus, and should the genus be split, they would appear

to be an obvious group to separate. *M.rufa* appears to me to be another closely related species which should be placed with this group with which it agrees in general characters and size and proportions. All three species replace each other as far as is known in the arid country from the French Sudan to north east Africa.

M.sabota is more strikingly distinct but shares the same characters of lacking rufous on the wing and a dark tail. It is a stockier bird with shorter tail in relation to the wing and heavier bill. Its close relationship to the foregoing three species is not apparent but it agrees with them better than with any other species of *Mirafra* in its wing and tail pattern and I propose to place it after them in the genus as a whole. *M.sabota* appears to be a characteristic of the older element in the fauna of southern Africa unless it be regarded as a very distinct southern representative of the *poecilosterna* group.

Mirafra javanica Horsfield.

Most writers now treat *M.cantillans* Blyth as a race of *M.iavanica*, and if this view is adopted, the African forms long regarded as races of *cantillans* will have to be treated as races of *javanica*. Probably only close acquaintance with both Asiatic and African forms could settle this question satisfactorily, but in view of the present treatment of *cantillans*, and the fact that previous writers have accepted the African forms as conspecific with *cantillans*, I propose to adopt *javanica* as the specific name.

This is probably an ancient species in view of its wide range from Australia to southern Asia and Africa ; its general characters are unspecialised and sparrow-like with a short stout bill and white outer tail feather.

M.hova Hartlaub of Madagascar is closely allied, and although it may be desirable to give it specific rank, it is in my view, derived from the *M.javanica* stock, and forms part of the same superspecies. I believe it to be one of the Oriental elements in the fauna of Madagascar.

M.passerina Gyldenstolpe of south western Africa is undoubtedly very closely allied to the East African forms of *M.javanica*. Chapin (Bds. Belgian Congo: 1953. pt. 3. p. 34) has already drawn attention to this relationship. I have compared a series of *M.passerina* with a series of *M.j.marginata* Hawker; I can see no obvious differences which could be regarded as specific. *M.passerina* appears a slightly larger bird in general appearance but measurements show considerable overlap. A comparison of field descriptions of behaviour reveals no important differences. The distribution is certainly no difficulty for a number of birds occur in dry areas of East Africa and reappear in dry south western Africa with a gap in their range in the better timbered central area of higher rainfall. I propose therefore to regard *M.passerina* as merely a southern African race of *M.javanica*. The African forms will therefore now stand as:

Mirafra javanica marginata Hawker
,, ,, *chadensis* Alexander
,, ,, *schillingsi* Reichenow
,, ,, *passerina* Gyldenstolpe

Mirafra cheniana Smith.

Chapin (l.c. p. 33) has already drawn attention to the close apparent relationship of *M.cheniana* with the East African *M.albicauda* Reichenow. Comparison of specimens of both species strongly supports his view.

Whether they should be regarded as conspecific is less easy to say. *M cheniana* seems to indulge in low fluttering or circling song flights and utters warbling or twittering calls. Field observations on *M.albicauda* refer to a high soaring flight and fine song. I believe that are rightly to be regarded as a superspecies with a broken distribution in the better timbered country of Central Africa such as was noted under the races of *M. javanica.* However the gap in their ranges can be narrowed a little for *M.cheniana* occurs in Southern Rhodesia whilst it is now known that a form of *M. albicauda* occurs in the Rukwa depression of Tanganyika, far to the south of its previous known southern limit at Tabora. This southern race differs somewhat from typical *M.albicauda* and I propose to name it

Mirafra albicauda rukwensis subsp. nov.

Description: differs from nominate *M.albicauda* in being paler and greyer on the feather edges of the upperside thus giving a colder appearance with greater contrast with the black feather centres; margins of wing coverts and secondaries notably pale, the latter almost white ; rufous margins of primaries paler; underside whiter with less tawny or buff wash, breast spotting reduced, under wing coverts paler; the penultimate outer tail feather with less blackish on the inner web which becomes obsolete half way to the apex, whereas in the typical form it reaches almost to the apex.

Type: male adult collected by D. Vesey-Fitzgerald at north end of Rukwa depression, southern Tanganyika Territory on 22nd September, 1954. In my collection.

Measurements of type: wing 80, tail 47, bill from skull 14.5 mm.

Distribution: only known from the Rukwa depression.

Remarks: six specimens examined. A male collected in February is labelled as having large gonads. I am greatly indebted to Mr. Desmond Vesey-Fitzgerald of the International Red Locust Service for his kind gift of these specimens.

Mirafra sabota Smith

This species lacks either white on the tail or rufous on the primaries, and seems to occupy a rather isolated position in the genus. *M. poecilosterna* (Rchw.) shows some resemblance in similar wing and tail characters but is very different in other respects and can hardly be regarded as very closely related. I reviewed *M. sabota* in 1947 (The Ibis: pp. 421-22) with a further note in 1948 (ibid. pp. 328-329). A little additional information can be given now to fill in some of the gaps.

M. s. sabota Smith

The nominate form extends into southern Portuguese East Africa and further material from Southern Rhodesia confirms the old records from Matabeleland. These birds from Southern Rhodesia may be a little lighter and brighter than birds from further south. Adequate material from the whole area now included under the nominate form may justify subdivision.

M. s. bradfieldi (Rbts.)

In 1947 I was unable to trace the boundary between this and *M. s. herero* (Rbts.) very accurately owing to lack of material. I have now examined twelve from Warmbad, Great Karras mts., Keetmanshoop, and Seeheim which are much too richly coloured and reddish above to assign to *herero.* They agree well with *bradfieldi* which must be extended into the south east of South West Africa.

M. s. herero (Rbts.)

Birds from Vogelweide, south of Aminuis, near the Bechuanaland border are a little brighter and more yellowish above than others from the interior of South West Africa but hardly sufficiently different to justify naming. The north western limits of this race are not very clear; birds from Omaruru and Usakos, assigned here in 1947, are not *herero*, and it seems clear that *herero* fades into a slightly paler race in the north west.

M. s. uis Hoesch and Niethammer

This race is in a sense an intermediate between *herero* and *naevia* Strickland. It is certainly rather buffier than *naevia* on the upperside and wing margins, and rather lighter and less strongly marked above than *herero*. I assign here birds from Erongo and Omaruru to the northern Kaokoveld at Sanitatas. The Erongo population was further separated by Hoesch and Niethammer but is not sufficiently distinct to justify separate recognition; it agrees better with *uis* than with *naevia*.

M. s. naevia Strickland

There has been difficulty in fixing a type locality for this name but Mr. J. D. Macdonald has made further examination of the type and believes it should be restricted to the palest and least striped population found south of Erongo to Otjimbinque. I have examined five recently collected specimens from Usakos and Karibib which are paler less buffy above than *uis* and less striped above, and represent the end of the cline of pallor in the north west of the range in South West Africa. *Naevia* is well marked when compared with *herero* but no very clear line between *naevia* and *uis* or between *uis* and *herero* can be drawn, and no violence to taxonomy would result from treating *uis* as an intergrade not worth separate recognition.

M. s. waibeli Grote

Three freshly collected topotypical specimens make it clear that the west corner of Etoscha pan is occupied by a very distinct population, very whitish on the upperside but with heavy black streaking. Its distribution remains to be worked out.

M. s. hoeschi Stresemann

In 1948 I placed *M. s. elfriedae* Hoesch and Niethammer from Onguma as a synonym of *waibeli* as only two worn specimens were available and it seemed likely that the greyer colour was due to abrasion. I now have three fresh plumaged specimens from Onguma which show that birds from this locality, less than one hundred miles east of the type locality of *waibeli* are in fact much too dark and grayish brown to be placed under *waibeli*. Their distinction from *hoeschi* is less obvious and it will be as well to call birds from east of Etoscha pan and north east of *herero* under a single name until much more material is available.

The Ngamiland population

Roberts (Ann. Trvl. Mus. 1932. 16. p. 122) assigns an adult and a juvenile from Lake Ngami to the pale sandy, small billed *M. s. sabotoides* (Rbts.) of west Kalahari (Gemsbok pan). Mrs. Hall rightly points out (in litt.) that a single Lake Ngami bird in the British Museum is more like the dark birds of north east South West Africa, lacking the sandy tinge of *sabotoides*, but not as dark as *hoeschi*. However I believe that the Ngamiland population is distinct from either and propose to describe it as follows:

Mirafra sabota vesey-fitzgeraldi subsp. nov.

Description : differs from *M. s. sabotoides* in being duller and browner above without the warm sandy tinge of that race ; in colour of the upper side more like *M. s. hoeschi* but with a small bill as in the nominate race, and lighter above than *hoeschi* with less heavy streaking ; the wing coverts and secondaries with more reddish brown, less whitish margins than *hoeschi :* the breast with a stronger brown wash than *hoeschi.*

Type : male adult in breeding condition collected by L. D. E. F. Vesey-Fitzgerald at Dautsa, Ngamiland on 27th October, 1954. In my collection.

Measurements of type : wing 88, tail 50, bill from skull 16 mm.

Distribution : Ngamiland, Bechuanaland protectorate.

Remarks : it is unusual to find the larks of Ngamiland racially identical with those of north east South West Africa, and they often differ racially from the races of the western Kalahari. Search for this species should be made in south east Angola or southern Barotseland for it is to those areas that racial variation in Ngamiland is often most close.

Variation in bill size: As is well known *M. sabota* varies considerably in bill size in various populations especially in South West Africa and adjacent areas and this is due to both length and depth. This is often fairly obvious to the eye but measurements reflect it less obviously. By measuring the length of the bill and depth at the nostrils in a series, taking the averages of these measurements and multiplying these averages the differences can be expressed more clearly as a measure of comparison. E.g. in *M. s. bradfieldi* the bill from the skull measures 18–20, the depth 6.5–7 mm. The averages multiplied are 131. In *herero*, *naevia* and *uis* the length runs from 17.5–19 and depth 5.5–7 but the generally slighter bill is reflected in the averages multiplied out which only reach 110. The much smaller bill of the Ngamiland bird on this basis multiplies to 88 mm. *waibeli*, *elfriedae* and *hoeschi* agree with *herero*.

Remarks on the Rock and Speckled Pigeons, *Columba livia* Linnaeus, and *C. guinea* Linnaeus

by Mr. Derek Goodwin

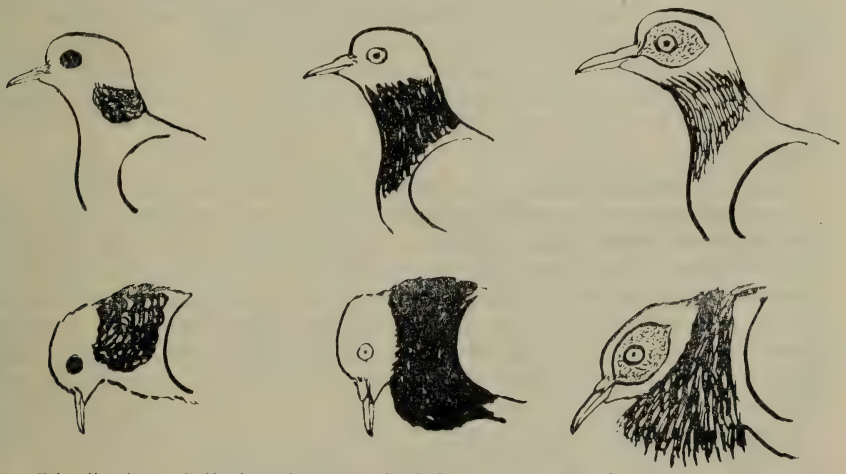
Received 19th August, 1955

Columba livia and *C. guinea* are allopatric throughout most of their world ranges, although they occur together in parts of the Sudan (Lynes 1925) and West Africa (Bannerman 1931). Superficially they differ much in appearance, each showing more apparent resemblance to other species of, respectively, the palearctic and ethiopian regions. A closer scrutiny suggests however, that *C. guinea* may be more nearly related to *C. livia* than are any other species of *Columba* (except of course the Blue Hill Pigeon, *C. rupestris* Pallas. I propose here to compare the characters of these species with those of other congeneric pigeons found in the same or nearby geographical areas.

The two are dissimilar in colour and colour pattern, but all the characters in which *C. guinea* differs from *C. livia* in this respect are to be found in some of the domestic and/or feral forms of *C. livia*. *C. livia* shows considerable resemblance in colouration to the Stock Dove, *C. oenas* Linnaeus,

and the Yellow-eyed Stock Dove *C. eversmanni* Bonaparte, and to a lesser degree *C. guinea* shows some resemblance to the Somaliland Pigeon, *C. olivae* Stephenson Clarke, and the Olive Pigeon, *C. arquatrix* Temminck. These seem to be examples of the frequent tendency for related forms in the same general geographical area to show convergence in colour or structure, rather than evidence of particularly close affinity. In the general greyish colour of head and body and in the colour and markings of the tail *C. livia* and *C. guinea* are, of course, much alike, but *C. oenas*, *C. eversmanni*, *C. albitorques* Rüppell, and *C. olivae* also resemble them in this.

Most species of *Columba* show areas on the neck where the plumage differs in colour and structure, having been modified for use in the bowing display. In *C. guinea* and *C. livia* (and *C. rupestris*) this display plumage completely encircles the neck and is especially noticeable on the upper breast. In all the other species mentioned above, the display plumage is concentrated on the back and sides ot the neck, being absent or only slightly developed in front. Structurally the irridescent neck feathers of these three species differ from those of all other of *Columba* in being bifurcated. This bifurcation is least in C. *rupestris* and most developed in *C. guinea*. Owing to their similar texture and relative stiffness, the display feathers of the White-collared Pigeon, *C. albitorques* bear much resemblance to those of *C. guinea*. This seems to be another case of convergence in general appearance, as they are very different in form.



Distribution of display-plumage (shaded in) on necks of *C. oenas*, *C. livia* and *C. guinea* in normal position (top row) and with neck inflated and display plumage erected in the bowing-display (bottom row).

Feathers from the display-plumage on the necks of (L. to R.) *C. olivae*, *C. rupestris*, *C. livia* and *C. guinea*. Only the indescent areas are shaded.

The large area of bare red orbital skin of *C. guinea* is but an extreme development of a character shown to some degree by the other *Columba* of the Ethiopian regions. It is of interest that in two of these—*C. unicincta* Cassin, and *C. olivae*— the orbital skin is also red. but it is doubtful if this indicates any close affinity. *C. olivae's* closest relatives are almost certainly *C. oenas* and *C. eversmanni.* It is a "Rock Pigeon" only as far as habitat is concerned (as is *C. oenas* in many places) and indeed its environment is such that it could hardly be otherwise. As in the case of plumage colouration, so in the case of the orbital skin, *C. guinea* can be paralleled by some domestic breeds of *C. livia* which have red or greatly enlarged areas of bare skin around the eyes. In these, however, it assumes the monstrous character common to the results of artificial, as opposed to natural, selection.

Thus the morphological characters wherein *C. guinea* and *C. livia* differ do not appear to be very fundamental. Apart from the obvious similarities of form and structure, which might be due to convergence owing to their similar ecology, they share (together with *C. rupestris*) a structure and distribution of display plumage not found in other *Columba* species. It is pertinent to consider briefly the extent to which characters other than the taxonomic ones confirm or deny the suggestion of the close relationship of the two species.

Work on the blood antigens of *C. oenas, C. livia, C. guinea C. palumbus* Linnaeus, *C. jathina* Temminck, and some American species led those engaged theron (Cumley and Irwin 1942) to conclude that the Speckled Pigeon was biochemically more closely related to the Wood Pigeon than to the Rock Pigeon. If so, it seems to me possible that this is due to these two species having remained closer to the blood type of a common ancestor rather than to having diverged from such a common stock at a later period than *C. livia.*

The incubation and fledging periods of *C. guinea* are shorter than those of *C. livia* and agree more nearly with those of *C. oenas* and *C. albitoruqes.* This might perhaps reflect selection, due to *C. livia* being less liable to nest-predation, rather than degrees of relationship. In this connection it would be interesting to compare incubation and fledging rates of the various wild races of *C. livia* both with each other and with domestic varieties. In the case of the Mallard, *Anas platyrhynchos* Linnaeus, it is well-known that eggs of the domestic forms usually take 28 days to hatch, whereas those of wild Mallard take only 25 or 26. Two young, pure-bred, *C. l. livia*, at present in my possession, commenced to fly at an earlier stage of development than young domestic *C. livia* normally do.

In its voice and displays *C. guinea* is certainly closer to *C. livia* than it is to any other pigeon known to me. Indeed except for that by which *C. livia* exhibits the black bars on its wings, there is hardly a display movement which is not shown in very similar, usually almost identical, form by both. This seems most unlikely to be due to convergence, especially in view of the fact that *C. albitorques* and *C. leuconota* Vigors, which are also rock-haunting species, differ in this respect from them (Taibel 1954, Newman 1911) and display more similarly to *C. palumbus* and *C. oenas.*

To sum up, it may be said that some morphological characters, the voice,

and most behaviour-patterns of *C. guinea* and *C. livia* suggest a closer relationship between these two, than between either and any other species, with the exception for *C. livia* of its relative *C. rupestris*. The only evidence to the contrary is their difference in blood composition.

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Note on an alleged specimen of *Hylocichla u. ustulata* Nuttall, from British Guiana

by Mr. Derek Goodwin

Received 2nd September, 1955

Hellmayr (Catalogue of the birds of the Americas and the adjacent islands in Field Museum of Natural History, Pt.7, 1934, p.457) states in a footnote: "Records of the Russet-backed Thrush from South America are obviously due to confusion with *Hylocichla ustulata swainsoni*. Salvin (Ibis 1885 p.197) claims that a single specimen obtained by H. Whiteley on 6th December, 1881 at Roraima, British Guiana, is referable to *H.u. ustulata*. Although the identification has been corroborated by Sharpe (Monog. Turd. 1. p.176) and Chubb (Bds. Brit. Guiana 2, p.389, 1921) the example needs careful re-examination before this extraordinary record can be accepted".

The specimen referred to is in the national collection, Brit. Mus. reg. no. 1885:3:2:90. In the course of re-arranging the thrushes it has now been re-examined, with results that amply confirm Hellmayr's doubts. It is, in fact, a Grey-cheeked Thrush, *Hylocichla m. minima* Lafresnaye. It may have been originally misidentified because the upper parts are more reddish brown in colour than other specimens of *H. minima*, although in this respect it is almost as unlike typical specimens of *H. ustulata*. The reddish tones may be due to "foxing". However, the specimen shows quite clearly the principal specific characters of *H. minima*, namely whitish eye-ring and lores and lack of buffy suffusion on throat and cheeks. Also British Guiana is within the normal wintering range of *H. minima*.

A New Race of *Phylloscopus umbrovirens* (Rüppell) from the Juniper Forests of Northern British Somaliland

by Mr. P. A. Clancey

Received 15th July, 1955

Sclater, "Systema Avium Æthiopicarum", part II, 1930, p. 506, and Chapin, "Birds of the Belgian Congo", vol. III, 1953, p. 477, place the northern British Somaliland populations of the small leaf-warbler *Phylloscopus* (=*Seicercus*) *umbrovirens* (Rüppell) as referable to the race *P. u. omoensis* (Neumann), 1905: Banka, Omo River region, south-western Abyssinia, while other workers have placed them as nominate *P. umbrovirens*, which was described in 1840 from Simen, in central Abyssinia. At the request of my colleague, Mr. J. G. Williams, Ornithologist of the Coryndon Memorial Museum, Nairobi, I have recently studied a meticulously prepared series of specimens from Erigavo, northern British Somaliland, in conjunction with material of the races *P.u. umbrovirens*, *P. u. omoensis*, *P. u. mackenzianus* (Sharpe), 1892: Kikuyu, Kenya Colony, and *P. u. yemenensis* (Ogilvie-Grant), 1913: Manacha, Yemen. I find that the Erigavo birds differ markedly from the races listed on important and significant colour and dimensional characters. They are obviously not the same as either nominate *P. umbrovirens* or the more saturated southern Abyssinian race, *P. u. omoensis*, as claimed by authors, and I believe that they represent a well-defined new race which is restricted in its distribution to the juniper forests crowning the high escarpment of northern British Somaliland.

Phylloscopus umbrovirens williamsi, subsp. nov.

Type: ♀ adult. Juniper forest 10 miles north of Erigavo, northern British Somaliland. Collected by J. G. Williams. 27th February, 1954. To be deposited in the collection of the British Museum (Nat. Hist.), London.

Diagnosis: Differs from the Abyssinian races *P. u. umbrovirens* and *P. u. omoensis* (*P. u. erythreae* (Salvadori), of northern Abyssinia and Eritrea, I have not examined), in being darker, browner and rather more uniformly coloured above. Ventrally much paler, with little or no brown wash on the throat and upper breast. Wings with no yellow on the lesser and median coverts and with less yellow on the primary and secondary coverts, remiges and tertials. Less yellow on the rectrices, and bill longer, *i.e.*, 13–14 mm. as against 12–13 mm. in the races mentioned.

P. u. yemenensis of south-western Arabia is rather similar to the nominate race but differs in having the dorsal surfaces uniform—in *P. u. umbrovirens* the mantle is paler and greyer than the crown and nape—and from it the new race here described can be differentiated on characters similar to those enumerated in the comparison with *P. u. umbrovirens* and *P. u. omoensis*.

From *P. u. mackenzianus* of Kenya Colony *P. u. williamsi* differs in being darker on the upper-parts; in showing much less yellow on the wings and tail; and in having the sides of the head and body less brownish, and the under tail-coverts are not yellowish. The bill is also longer than in

P. u. mackenzianus.

Range: Known only from the juniper forest in the vicinity of Erigavo, northern British Somaliland, but almost certainly widely distributed throughout the forest capping the northern Somaliland escarpment.

Measurements of the Type: Wing (flattened) 55.5, culmen from base 14, tarsus 20.5, tail 44 mm.

Material: The *Type* and four paratypes. The Type to be deposited in the British Museum (Nat. Hist.); three paratypes in the Coryndon Museum collection; one paratype in the Durban Museum collection.

Remarks: *P. u. williamsi* differs from all its geographical congeners in the reduced amount of yellow on the wings, darker upper-parts, and paler, less brownish, ventral surfaces. The bill is also longer and there is a trend towards greater over all size, which is most marked in the average greater tail-length of the males, *i.e.*, 50–52 mm. as against 44–50 mm. in ♂♂ of the other races examined.

I am deeply indebted to Mr. Williams, who collected the specimens, for kindly allowing me to describe the new race in his honour. I am also grateful to Mr. J. D. MacDonald, Keeper of the Bird Room, British Museum (Nat. Hist.), London, and Dr. A. L. Rand, Curator of Birds, Chicago Natural History Museum, for the prompt way my requests for the loan of comparative material were met, and to Dr. James P. Chapin for looking over the series in conjunction with me.

On Phylloscopus trochilus (Linn.) in Great Britain

by Mr. Alfred Hazelwood and Mr. Eric Gorton

Received 12th July, 1955

Clancey has shown (British Birds XLIII p. 188) that examples of *Phylloscopus trochilus* (L.) from Scotland are not to be distinguished from the grey-brown birds which occur in Scandinavia and which he attributes to *P. t. acredula* (L.).

A series of spring birds from Scotland in the Bolton Museum collection supports Clancey's statement except inasmuch that a few extreme examples resemble in colour, though not in size, the eastern race *P. t. yakutensis* Ticehurst. These birds are grey-brown dorsally, except for a tinge of green on the rump and quite without yellow below, apart from a tinge on the under-wing coverts (in one ♀ even this is missing).

Ticehurst (A Systematic Review of the Genus Phylloscopus, British Museum, Nat. Hist. 1938), however, shows that the name *acredula*= *eversmanni* Bonaparte is to be referred not to the brown and white birds but to the brightly coloured olivaceous form which fringes the nominotypical race on the north and east, although subsequently treating both forms as phases of *acredula*.

It is our view that the *P. trochilus* populations are best regarded as two separate, now rejungent, forms which survived the ultimate Glacial period in segregate pockets and which spread differentially northwards during post-glacial climatic changes. This contention is supported by their different winter quarters. If we associate the re-entry of the grey-brown and white *yakutensis*-type populations with the Boreal phase, accompanying the northward spread of *Pinus sylvestris* L., and that it gave way before

the typical, deciduous tree haunting, race during the Atlantic phase up to about the limit of the 16° C isotherm for July, then the present day distribution of the two plumage-phases and the zone of their intergradation is wholly understandable. The situation is largely paralleled by the two plumage phases of *Corvus cornix* L.

Under this hypothesis, *P. trochilus acredula* (L.) *sensu strictu* would be reserved for the large, pale, olivaceous birds which represent the terminal form of a gentle cline of the green phase which extends from the Mediterranean to Scandinavia. We have examined specimens of this race from Skana, Oslo and Nerike in Sweden.

In Great Britain, a series of spring birds from Sussex to Sutherlandshire shows a reasonably constant green form in the South of England, a small number of clear-cut grey-brown and white birds from Scotland (Perthshire, Inverness and Fife) and a steadily intergrading population from Lancashire northwards into Scotland whence we have seen no examples of pure *P. trochilus trochilus*.

It follows that the brown and white birds which have been taken on passage in England cannot be referred to *P. t. acredula* and many are probably of Scottish origin. It is often extremely difficult in the North of England to separate passage migrants from resident birds during the short period in which they are sufficiently unworn to be of critical use.

Clancey has already (ut supra) limited the type locality of *Phylloscopus trochilus trochilus* L. (*Motacilla trochilus* Linnaeus, *Syst. Nat.*, ed. 10, 1758, p.188 – ex *Fauna Suecica*, Aldrovani, Willughby) to England south of the Thames. Since no type specimen exists, we deem it expedient to erect a neotype as follows:

Phylloscopus trochilus trochilus Linn

Neotype A ♂ from Sevenoaks, Kent, April 14th, 1937. Ex Coll. Dr. J. G. Harrison, now in Coll. British Museum (Nat. Hist.)

Forecrown to upper tail coverts yellowish-olive, the crown and hindneck faintly streaked umber--brown, rump and upper tail coverts a shade brighter than mantle. Supercilium dull yellow, lores and ear-coverts dull bistre-brown, cheeks brownish-yellow. Chin and throat dingy white, faintly washed reed yellow. Breast deepens from dingy white streaked yellow at centre to yellow suffused buff at sides. Belly dingy white, streaked and suffused reed yellow at flanks. Under tail coverts pale lemon yellow. All wing and tail feathers dull brown, fringed on outer edges yellowish olive. Under wing coverts, axillaries and tibial feathering bright lemon yellow.

Wing 68 mm. 2nd primary barely exceeds 6th. 3rd, 4th & 5th emarginate on outer web.

It is important to note that not only, in a zone of intergradation, phenotypes of fixed races are likely to be thrown up by ordinary genetic recombination but also that the zone itself is liable to alter in depth and situation with oscillations of the climate. It may well be, for instance, that the birds of this species known to Linnaeus at Uppsala would not be consonant with examples from the same locality today.

For these reasons, it seems to us that until nomenclatoral practice attains a much required greater degree of flexibility it were better to refer to intermediate populations only binomially since the appearance of any individual

may have Mendelian rather than subspecific significance. It would be possible to denote such mixed poulations by the addition of the coined word "miscegens" after the authority. Thus, Willow Warblers from Scotland would be referable to as *Phylloscopus trochilus* L. miscegens.

We must ackowledge our indebtedness to Col. Meinertzhagen for help and advice, to Dr. J. G. Harrison for the loan of material from Scotland and Western Europe and for very kindly supplying a fresh sound skin from the restricted type locality, also to Mr. E. L. Seyd for access to the Continental material in the Manchester Museum.

Map to show approximate line of 16°C isotherm.

On the occurrence of "Mottled" plumage in the Carrion-Crow *Corvus corone corone* Linnaeus

by Mr. Bryan L. Sage

Received 22nd September, 1955

The occurrence of individuals, usually juveniles, with mottled or barred plumage in various local populations of the Rook (*Corvus frugilegus frugilegus* Linnaeus) is now a well known phenomenon (see *Antea* 69: 117–118; 70: 7 and 18–19), but there does not appear to be any previous published record of the occurrence of this condition in other species of the genus *Corvus*.

It was therefore with considerable interest that I received from Mr. I. J. Ferguson-Lees the wing of a Carrion-Crow exhibiting this condition, which had been shot at Cotheridge, Worcestershire, on 17th March, 1955, sex not recorded, and sent to him by Mr. A. J. Harthan. This wing is generally of a brownish shade (as is often the case with the aberrant Rooks), and there is a wide brownish-white bar extending across both webs of most of the primaries, secondaries and greater wing coverts. These bars are subterminal being situated some 5–7 mm. from the tip of the feather.

This wing is additionally interesting in that the date the bird was shot precludes the possibility of it being juvenile. This fact coupled with the stage of growth of the feather suggests that it was a bird in first summer plumage. All aberrant specimens of the Rook obtained so far have been juveniles, and there has previously been only circumstantial evidence to suggest that the condition can persist beyond the juvenile stage.

Mr. A. J. Harthan states (*in litt*) that on 24th March, 1940, he trapped 5 Jackdaws (*Corvus monedula spermologus* Vieillot) and one Rook with similar brown colouring on wings, back and tail feathers; these feathers had paler markings but not anywhere near white. Mr. I. J. Ferguson-Lees informs me (*in litt*) that he saw a dead Crow, similar to the 1955 Worcestershire bird, at Clophill, Bedfordshire, in mid-March 1945. All these must have been at least one year old.

A word of warning on the subject of aberrant brown-plumaged birds may not be out of place. It is well known fact amongst aviculturists that a diet deficiency in the nestling stage can often result in a juvenile Corvine bird having brown plumage to a lesser or greater extent, these birds usually moult out the normal colour. Mr. Derek Goodwin informs me that this condition is of quite common occurrence in the Jackdaw, the birds usually appearing a unicolorous brown. It is safe to assume that the same remarks apply to other normally black-plumaged members of the Corvidae. There is a record (*Zoologist* 1885: 349) of a Carrion Crow of a warm umber-brown colour which was seen by Mr. J. Marshall in a taxidermists; no doubt this bird had suffered from a diet deficiency. When dealing with such aberrant birds care must be taken not to confuse the two conditions. Generally speaking the less common aberration takes the form of regular barring of a grey or whitish-brown shade; whilst birds suffering from a diet deficiency are normally a brownish shade all over with mottling, if present at all, in a slighter lighter shade of the same brown.

The races of Whyte's Barbet

by Mr. C. W. Benson

Received 30th September, 1955

I have had access to all the material of Whyte's Barbet *Buccanodon whytii* Sharpe, in the British Museum and in the National Museum of Southern Rhodesia, Bulawayo. I am also grateful to Dr. G. Rudebeck and Dr. J. M. Winterbottom for loan of the material in the Transvaal and South African Museums respectively.

In *B. w. stresemanni* Grote, and *B. w. buttoni* White, the brown feathers of the back and mantle tend to be more markedly tipped with white than in the southern races. Also, on the whole they are rather more distinctly

glossy blue-black rather than blackish slate on the nape, throat and upper chest, while in Southern Rhodesia wing-measurements tend to be rather long. But it is in the colour of the crown and forehead, and cheek-stripe, that geographical variation is most clearly marked, and on this basis I propose the following arrangement of races:

Buccanodon whytii sowerbyi (Sharpe).

Stactolaema sowerbyi Sharpe, Bull. B.O.C., 7, 1898, p. 36: Fort Chiquaqua, 18 miles E.S.E. of Salisbury (see "Ibis", 1898, pp. 568, 572).

Crown and forehead wholly pale yellow; cheek-stripe white. Wing 95 mm. in two specimens from Southern Rhodesia; wing 90–96, average 92.3 mm., in remainder from further north.

Range: Fort Chiquaqua and Mazoe, north-eastern Southern Rhodesia; in eastern Northen Rhodesia and Nyasaland, plateau country between Nyasa/Shire and Luangwa Rifts, from Dedza and Fort Jameson north to the Mukutu Mts. at approx 10° 30′ S., 33° 30′ E.

Material: British Museum, 17; Bulawayo Museum, 6; Transvaal Museum, 4; South African Museum, 1.

Buccanodon whytii irwini, new race.

Differs from *B. w. sowerbyi* Sharpe in having only the sides of the crown and forehead wholly pale yellow, the centre being blackish slate with only inconspicuous tipping of pale yellow; cheek-stripe white. Wing 92–98, average 95.5 mm.

Range: Eastern Southern Rhodesia, Melsetter to Inyanga and north-west to Rusape and Macheke (18° 10′ S., 31° 52′ E.).

Type: ♂. Rusape, Southern Rhodesia: 18° 32′ S., 32° 07′ E. 24th May 1953. Collected by Mr. M. P. Stuart Irwin. Collector's No. R4/16. In the National Museum, Bulawayo, Southern Rhodesia. N.M. Reg. No. 12284.

Measurements of Type: Wing 98, tail 55, culmen from base 20mm.

Material: British Museum, 3; Bulawayo Museum, 11; South African Museum, 2.

Remarks: Named after the collector. I must also point out that it was Mr. R. H. N. Smithers who first drew my attention to the difference between *B. w. sowerbyi* and *B. w. irwini*. That Nyasaland and eastern Northern Rhodesia birds should be *B. w. sowerbyi*, while further south in Southern Rhodesia there should be a distinct race, is most extraordinary, because the two populations are separated by the low-lying Zambesi Valley, where it is unlikely that *B. w. sowerbyi* occurs. Moreover, there appears to be no barrier between *B. w. sowerbyi* and *B. w. irwini*. However, the situation is no more remarkable than in *Arizelocichla milanjensis* (Shelley), which occurs in the highlands of eastern Southern Rhodesia and at Mlanje, southern Nyasaland as *A. m. milanjensis*. But a short distance to the west of Mlanje, at Cholo and near Blantyre, it is replaced by *A. m. striifacies* (Reichw. and Neum.). Except for four specimens in the British Museum showing some tendency towards *B. w. irwini*, the northern series of twenty-six are exactly like the type of *B. w. sowerbyi*, in the British Museum. And the only other specimen of *B. w. sowerbyi* from Southern Rhodesia, at Mazoe, 17° S., 31° 50′ E., also in the British Museum, seems slightly intermediate, having rather pronounced slaty towards the base of the yellow feathers on the centre of the crown and forehead. But it is more like *B. w. sowerbyi* than *B. w. irwini*. The difference between *B. w. sowerbyi* and *B. w. irwini*, however,

is so relatively constant that it would be wrong not to recognise it by name. Captain C. H. B. Grant agrees.

Buccanodon whytii whytii (Shelley)

Smilorhis whytii Shelley, "Ibis", 1893, p. 11: Zomba, Nyasaland. Whole crown and forehead blackish slate, conspicuously and finely spotted with white; cheek-stripe white. Wing 90–95, average 92.5 mm.

Range: Southern Nyasaland east of the Nyasa/Shire Rift, from Mlanje and Blantyre to Mangoche.

Material: British Museum, 13

Remarks: Plate I, "Ibis", 1893 shows the characters of this race well, which are constant in all specimens. Separated from *B. w. sowerbyi* by hot, low-lying country in the Zambesi and Shire Valleys.

Buccanodon whytii stresemanni Grote.

Buccanodon anchietae stresemanni Grote, O.M., 1934, p. 86: Kitungulu, south end of Lake Tanganyika.

Crown and forehead as in *B. w. sowerbyi*, but cheek-stripe pale yellow. Wing 90–94, average 91.6 mm.

Range: North-eastern Northern Rhodesia and south-western Tanganyika Territory, from Mporokoso, Luwingu, and Kasama to Isoka, Tunduma and Sumbawanga.

Material: British Museum, 8, Bulawayo Museum, 12

Remarks: Characters constant in all specimens. There is no geographical barrier between *B. w. stresemanni* and *B. w. sowerbyi*. Intergrades should be sought for in the Karonga district, northern Nyasaland, where I have seen the species, but failed to obtain specimens.

Buccanodon whytii buttoni White

Buccanodon sowerbyi buttoni White, Bull. B.O.C., 65, 1945, p. 18: Ndola, Northern Rhodesia.

Crown and forehead as in *B. w. irwini*, but centre darker, bluish black rather than blackish slate; cheek-stripe pale yellow. Wing 90–93 mm.

Range: Ndola and Kawambwa, Northern Rhodesia.

Material: British Museum, 1; Bulawayo Museum, 2.

Remarks: As already indicated, the difference in the colour of the centre of the crown and forehead from *B. w. irwini*, is also apparent on the nape, throat and upper chest. *B. w.* buttoni should intergrade with *B. w. stresemanni* between Kawambwa and Mporokoso/Luwingu.

General Remark: It is clear that *Buccanodon anchietae* Bocage is specifically distinct from *B. whytii*, *B. a. katangae* Vincent and *B. w. buttoni* overlapping at Ndola, see White, Bull. B.O.C. 65, 1945, p. 18. But although I have examined a specimen of *B. a. katangae* in the South African Museum from further east, in the Serenje district, and it has also been obtained by Major W. E. Poles and myself on the south-east side of the Bangweulu swamps, at approx. 11° 40′ S., 30° 40′ E., there is no evidence that *B. w. stresemanni* overlaps with *B. a. katangae*.

P.S. Dr. H. Schouteden has also shown me in the Congo Museum, Tervuren, two specimens of *B. w. sowerbyi* from Salisbury and Marandellas, wings 92.5, 95 mm.; and three of *B. w. irwini* from Wedza, wings 93, 94, 97 mm. These specimens show the difference between the two races quite well. They were collected by Captain C. D. Priest, except that from Salisbury, by D. Townley.

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DINNERS AND MEETINGS FOR 1956

17th January, 21st February, March joint with B.O.U. 17th April, 15th May, 18th September, 16th October 20th November, 18th December.

SEPARATES

Contributors who desire free copies of the Bulletin containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. As the proofs will be corrected by the Editor, it is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Committee have decided that in future the Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions up to 1,500 words on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

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The five hundred and forty-fifth meeting was held at the Rembrandt Hotel, South Kensington, on Tuesday, 17th January, 1956, following a dinner at 6.30 p.m.

Chairman: MAJOR GENERAL C. B. WAINWRIGHT.

Members present: 27; Guests 8; Total: 35.

Tape Recordings of Kenya Birds

Mr. M. E. W. North played an interesting series of tape recordings of twenty six species of Kenya birds. Recordings of two morphologically indistinguishable groups of *Cisticolae* revealed that they had totally different songs. Another *Cisticola* was shown to possess eight phrasic variations to its song. The Mourning Dove has three calls—the song proper, a greeting and an alighting call. Two species of Hornbill, the Yellow-billed and Von de Decken's have identical calls.

Birds in Greenland

by COLONEL R. M. MEINERTZHAGEN

Received 13th December, 1955

When at sea the Fulmar is by far the most abundant bird, either sitting on the water in small rafts or floating over the surface. At the mouth of Disko Fjord is a huge colony of some 40,000 birds, nests being placed on grassy ledges and as high as 1200 feet above sea level. Young were just hatching in mid-July. We found the fulmar feeding when sitting on the surface when the sun begins to get near the horizon and again when the sun commences to rise at dawn. Their main food seems to be squid which come to the surface at these periods to feed on plankton. Of many Fulmar examined, only one failed to produce the beaks of squid ; these beaks appear not to be passed out with the faeces but slowly dissolve in the stomach and may possibly be used to aid digestion. Occasionally we saw Fulmar feeding at mid-day when sitting on the water ; they would dive from a floating position, the longest dive being seven seconds.

About 1 per cent of birds seen were the melanic phase.

When we went shark fishing the number of Fulmar which assembled round our boat for refuse and guts was incredible, just a huge mass of birds fighting and scrambling for offal. And they were so tame that with a landing net we might have picked them out by the dozen. One or two glaucous gulls which tried to get an odd scrap of offal, completely failed to get anything amid the splashing and scrapping that went on amid the rafts of fulmar.

We found Fulmar in full wing moult in June and July, many birds being unable to fly.

On several occasions as if by a given signal a whole party of fulmar floating over the sea surface would start the glide-and-paddle flight, just touching the water with their feet—"peterelling"—with a running motion; birds appeared to accelerate by this method for they would rise again, glide for perhaps a few hundred yards and then suddenly the whole party would resume peterelling. Possibly this method of flight was due to some atmospheric change, though we could not detect any.

It has been suggested by Erickson (Auk LXXII, 1955 p. 419) that this peterelling is order-wide and of genetic origin, the ancestral Procellariformes finding flapping flight difficult near the sea surface and adopted peterelling as an anxiliary means of propulsion. In the Oceanodroma group peterelling is the rule; in other groups the habit is more or less lost completely.

We found the Great Shearwater abundant off the south coast of Greenland in June and off the south-west coast in August. They were sitting on the sea in huge rafts of from 20 to 50 birds, their white tail bands and pointed wings being conspicuous. They appeared to be in full wing moult, many unable to fly.

Theirs is a splendid example of navigation without landmarks, coming, as they do, all the way from Tristan Da Cunha (their only known breeding ground) to this far away spot in the north Atlantic.

It needs to be explained why the Great Shearwater moults in its winter quarters, whilst the Fulmar moults when the young are hatching. Red-throated divers were seen on several occasions, often circling our boat at a great height and calling their wonderful wild note.

Geese are mainly confined to the east coast. But we did see a small flock of White-fronts a few miles north of Egedesmunde. A single drake Mallard in eclipse was seen in Disko Fjord in late June. Long-tailed Duck were common in family parties and going into eclipse in July.

The Common Eider breeds on Disko Island and is common though its numbers have been sadly reduced in recent years by the Greenlanders. King Eider are also abundant and have a special locality for their moult—off Flakerhuk. They breed much further north but after egg-laying the drakes come south in huge packs, accompanied by non-breeding birds and in July we saw them in hundreds though none had as yet (late July) lost their primaries.

The King Eider feeds in deeper water than the Common Eider and eats a coarser food (larger crabs and shells, though the Common Eider is the larger bird. We find much the same preference for shallow water in the larger Cormorant and deeper water for the smaller Shag.

The Merganser was not uncommon and several broods were seen and one chick obtained. The toothed or rather serrated mandibles are very

well developed in the chick. These serrations are not teeth in the sense that reptiles have them but they are a beautiful example of convergent development.

The Gannet was seen all the way from the Faroe Islands to within about a hundred miles of Greenland where they do not breed.

The Cormorant has several small colonies on Disko Island but is badly persecuted for its skin. Colonies where many hundreds of birds used to nest have dwindled down to a few pairs. Half-grown young were in the nests in late July. Adults were extremely wary, flying off at a mile's distance so soon as a boat is sighted.

Cormorants have both roosting and resting places to which birds resort for sleep and wing-drying ; these are in separate localities, the roosting places being fewer and therefore more crowded than the resting places. The largest resting place I have seen was on top of the royal palace in Constantinople which was badly white-washed despite the efforts of the fire brigade to make the birds desist. We saw one of these resting places on Disko Island, but only some twenty birds were using it. We were told that only a few years ago many hundreds used it.

Persecution in and out of the breeding season has made the Ptarmigan a comparatively rare bird, but even so, the few we saw were ridiculously tame.

I had expected to find Greenland alive with many wading birds but though many breed far inland there are few places on the coast suitable for them. Towards the end of July migration started and small parties were seen in suitable places—a few Sanderling, several parties of Dunlin and many flocks of Red-necked Phalarope ; these latter breed on the islands between Disko and the mainland. Turnstone and Purple Sandpiper were fairly common but not a sign of any American wader.

We saw several Great Skuas at sea in mid-June and up to 100 miles west of Fair Isle and the Faroe Islands but not in Greenland waters. Off the west coast of Greenland and out of sight of land we saw several Pomatorhine Skuas in June and at Flakkerhuk on Disko Island both Pomatorhine, Long-tailed and Arctic Skua were breeding on the outskirts of a huge Arctic Skua colony ; the Long-tailed seemed to be the most abundant. The terns paid no attention to them unless they had food and this they would swallow as quick as they could. As all the chicks of the tern had been taken by the Greenlanders there was no carrying of food and the skuas would go to sea to pirate the terns. I noted that the three species of skua had great respect for each other, the smaller always giving way to the larger if both were in action against a tern. One particularly obstinate tern, refusing to drop his fish, was struck by a Pomatorhine Skua and fell into the sea stunned.

Several pairs of the Greater Black-backed Gull were breeding on Disko Island but were none too common. A single pair of the British Lesser Black-backed Gull were seen about five miles west of Godhavn in early July. It will be remembered that the first description of this gull was given to a Greenland specimen (*Larus affinis*).

The Glaucous and Iceland Gulls are quite common and breeding on Disko Island. The best distinguishing features in the field is the more buoyant flight, faster wing-beat and more graceful flight of the Iceland ; when at rest the wings of the Iceland protrude well beyond the tail which

is not the case in the Glaucous. When seen together the larger and heavier Glaucous can be at once recognised.

Both these gulls regularly patrol the Kittiwake and Fulmar colonies, taking every advantage of parental absence.

The two largest Arctic Tern colonies were at Flakkerhuk where all the young had been taken by the Greenlanders and on the islands off Egedesmunde (Green Islands). Each colony numbered many thousands of birds.

At Flakkerhuk I watched a bathing and splashing display by hundreds of tern on August 4th. The performance commenced with great activity among the colony which hitherto had been quietly fishing ; quite suddenly they all made off rapidly towards a shallow lagoon, flying about fifty feet above water. Then one or two commenced to dive and on surfacing they did not at once take wing as is usual after a dive for food, but commenced to splash and wash ; very soon some hundreds were splashing and washing ; and then, quite suddenly they all took wing, flew about 200 yards and again dived followed by about five minutes splashing and washing. Finally they all flew to land where they dried and preened. After an hour or so the whole game was repeated by several thousand birds preceded by a sudden rush flight as though by signal.

On August 8th, we visited the huge Kittiwake colony on the Arve Prinsens Islands ; tens of thousands were nesting on a high cliff, nests being placed from almost sea level to well over a thousand feet. Chicks were about half-grown though a few were newly hatched. Several pairs of Ravens were raiding the colony, often just throwing the chicks down the cliff and the parents did not seem to have the power to combine and drive them off as terns will. At the bottom of the cliff were many hundreds of dead chicks all thrown down by these Ravens.

Razorbills and Brunnich's Guillemots were only found breeding in the large Kittiwake colonies on the Arve Prinsens Islands ; they were not in large numbers. Both had freshly hatched chicks in early August. Brunnich's Guillemots were found to be feeding exclusively on shrimps.

Little Auks were only seen on the Green Islands in Disko Bay and not more than a dozen were recorded. We did not find Puffins breeding where once they were numerous. Black Guillemots had small breeding colonies in many places, the largest being about twenty pairs in Disko Fjord.

I sat opposite a Snowy Owl at 30 yards distance for over half an hour before he made off ; and I saw a single Greenland Falcon flying past very low at Holsteinborg and was able to measure his speed at 51 m.p.h. ground speed.

Wheatears, Greenland Redpoll (*rostrata*), Snow Bunting and Lapland Bunting were fairly well distributed and common. Snow Buntings have become a town bird, building in houses and masonry and the Lapland Bunting is a village scavenger. So tame are the redpolls that I have had them feeding on dandelion seeds within a foot of me.

Ravens were fairly common everywhere, scavenging on the outskirts of settlements.

Bird protection in Greenland.

The slaughter of birds in Greenland by the Greenlanders is appalling and in several cases species are nearing extinction. This is due to four

main causes. Cheap guns and ammunition, desire for any form of meat and the abundance of small boats with motor engines. In addition, very little attention is paid to protective legislation, though very little of this exists.

As examples of senseless slaughter I quote the following cases which came under my personal observation.

In June, I found a heap of over fifty King Eider on a sandspit ; these were just left as the party had shot more than they could carry. Again in Disko Fjord on two occasions in July we saw small boats loaded with Common and King Eider, over fifty in each boat. The Eider during the moulting season are particularly vulnerable as they are close-packed and flightless, being easily driven ashore by boats and then despatched.

The large tern colony at Flakkerhuk produced one young bird out of many thousands of pairs ; all the eggs had been taken.

When we landed on Green Islands where there is a huge ternery, our men commenced to take every egg they could find though they were all on the point of hatching. Our efforts to stop them was just laughed at.

At Umanak nearly every house had quantities of Eider and Guillemot hanging outside in the middle of the breeding season.

When we visited a Cormorant rookery in Disko Fjord the three Greenlanders on board commended to shoot the chicks from the boat without a hope of recovering them and just left dead and wounded to rot.

We found Greenlanders utterly callous to suffering. They will bite off and swallow the orange knob at the base of a King Eider's bill when the bird was still alive. Gangs of small boys wander about near settlements when the young of Snow Bunting, Wheatear and Lapland Bunting are fledged, hunt them to death with stones and when the bird is caught the guts are bitten out and swallowed before the bird is dead and the chick then stuffed into a pocket.

Dr. Salomonsen has suggested the following remedies (Dansk. Orn. Foren. Tids. XLIX. 1955 p. 11).

a. Protection of all rookeries of Brunnich's Guillemot and restricted egg collecting.
b. Close season for cormorants.
c. No egg collecting at terneries after June 30th.
d. A ten year absolute protection for the Puffin.

I discussed this problem with Dr. Salomonsen in Copenhagen as I do not think his proposals go far enough.

The Greenlanders have for centuries depended on birds as an important food supply ; but that is no argument for endangering that same food supply. Also it cannot be too strongly emphasised that birds are not the property of the country where they breed. Birds are international property and it is the duty of every State to preserve bird life and prevent excessive destruction.

I would, in all humility suggest :—

a. That a high purchase tax be placed on all firearms and ammunition so that shooting beyond needs becomes an expensive luxury.
b. That the taking of eggs of all birds is prohibited after June 15th and that the killing of adults is prohibited on the breeding grounds.

c. That certain large breeding colonies enjoy absolute protection from any kind of disturbance.
d. That some official be appointed whose duty is to enforce the law of bird protection and ensure that culprits are adequately punished.
e. That education includes teaching the young that cruelty is one of the worst human vices.

A New Race of Babbler from West Africa

By Dr. William Serle

Exhibited at the December meeting of the B.O.C.

Illadopsis cleaveri marchanti, new race.

Description : Distinguished from all known races of *Illadopsis cleaveri* (Shelley) in that the forehead, crown, and nape are dark olive-grey not black ; in that there is a reduction in the breadth of the stripe which extends from the base of the bill over the eye and ear coverts to the side of the neck, and in that the anterior part of that stripe is buffish-grey, not grey or white. Further distinguished from *Illadopsis cleaveri johnsoni* (Büttikofer) and *Illadopsis cleaveri batesi* (Sharpe) in that the flanks and under tail coverts are rufous-buff not olive-brown, and from *Illadopsis cleaveri cleaveri* (Shelley) and *Illadopsis cleaveri poensis* (Bannerman) in that the rufous-buff of the flanks and under tail coverts is lighter in shade when compared with those two forms.

Distribution : The Owerri and Rivers Provinces of the Eastern Region of Nigeria.

Type : In the British Museum. Adult male, Omanelu, 5° 12′ N. 6° 52′ E. Rivers Province, Nigeria. 5th August, 1953. Collected by Dr. William Serle. Collector's No. N.2107. Brit. Mus. Reg. No. 1955.59.1.

Measurements of Type : Wing 76, culmen 14, tail 55, tarsus 26 mm.

Remarks : Named after Mr. S. Marchant who at Owerri obtained the first specimen (badly damaged) of this new form, and who, whilst refraining from naming it drew attention to its distinguishing characters in the Bull. Brit. Orn. Club (1950), vol. 70, p. 27.

Immature plumage : A newly fledged female juvenile (wing 66, tail 42 mm.) was obtained with the adult type. Entire upperparts from forehead to upper tail coverts, and including the wing coverts and inner secondaries, washed with rusty-brown. Chin and throat white. Breast, flanks, and under tail coverts rusty-rufous, with obscure dusky smudges on the breast and flanks. Even at this early stage it is distinguished from the fledglings of *I.c.batesi* and *I.c.poensis* by the grey not black crown and nape.

Field notes : The type and the juvenile female were obtained together in the undergrowth in rain forest of mixed primary and secondary growth. Both had eaten insects.

The distribution of Illadopsis cleaveri (Shelley) with a diagnostic key of its races.—In the course of identifying the new race the following material was examined in the British Museum and my own collection—*I. c. cleaveri*, two unsexed specimens (one the type) ; *I. c. johnsoni*, one female ;

I. c. marchanti, two males (one the type) and one juvenile female ; *I. c. batesi*, a long series including the type ; *I. c. poensis*, two males (one the type) and one juvenile male. The characters and distribution of the races is as follows :—

Illadopsis cleaveri johnsoni (Büttikofer)

Eye stripe greyish white, crown black, throat and breast grey of a darker shade than any other race, flanks and under tail coverts olive-brown. Wing, 1 adult♀, 67 mm. Range : Sierra Leone (see Ostrich, 1949, p. 4) to Liberia.

Illadopsis cleaveri cleaveri (Shelley)

Eye stripe greyish white, crown black, breast light grey, flanks and under tail coverts rufous-buff. Wing, 2 unsexed adults 69, 68 mm. Range : Gold Coast.

Illadopsis cleaveri marchanti, Serle.

Eye stripe buffish-grey, anteriorly, grey posteriorly, crown dark olive-grey, breast grey, lightly washed rufous, flanks and under tail coverts bright rufous-buff. Wing, 2 adult♂, 77, 76 mm.

Range : Owerri and Rivers Provinces of Eastern Region, Nigeria.

Illadopsis cleaveri batesi (Sharpe).

Eye stripe grey, crown black, breast grey washed olive-brown, flanks and under tail coverts olive-brown (in a few individuals from the western extremity of its range lightly washed rufous). Wing, 10 adult♂, 74-84 ; 10 adult♀, 69-74 mm.

Range : Obudu Division of Ogoja Province Eastern Region of Nigeria to Gaboon.

Illadopsis cleaveri poensis (Bannerman)

Eye stripe grey, crown black, mantle darker in shade than any other race, breast olive-brown, flanks and under tail coverts dull rufous-buff. Wing, 2 adult♂, 77, 77 mm.

Range : Fernando Po.

An Icelandic Redshank in freshly moulted Summer Plumage in November *

By Dr. James M. Harrison and Dr. Jeffery G. Harrison

Received 29th November, 1955, and subsequently modified.

On November 9th, 1955 one of us collected a female Icelandic Redshank, *Tringa totanus robusta* Schiöler, on Milfordhope Marsh, Medway Estuary, Kent. The bird is a female, the wing measuring 169 mm., thus placing it within the measurements of the Icelandic race. The ovary was identical in size to that of a second female Redshank shot on the same day ; both measuring 7×4 mm. The skull was incompletely pneumatised, but this is a species which does not develop full pneumatisation and therefore these findings cannot be used as an indication of the age of the bird.

The Icelandic example was remarkable for being in advanced *freshly moulted* summer plumage, the head and neck being streaked with black, the breast and flanks strongly spotted and streaked and the mantle showing

* Exhibited before the B.O.C. at the December, 1955 meeting.

well developed black barring, with the incipient chestnut of full summer already apparent at the periphery of some of the feathers. The accompanying plate shows these differences in comparison with the other female shot on the same day, which is in normal winter plumage.

We have examined large numbers of waders in autumn, but we have never seen one which at the time of autumn moult had assumed this considerable degree of summer plumage or indeed any summer plumage. The picture is of course quite different from that of the autumn adult wading bird in its retained and worn summer plumage, in which the feathers show much abrasion. All the feathers in this Redshank are new. One can only assume that in this most exceptional case, there must have been an over-acting ovarian influence, which stimulated the development of summer dress at the time of moulting. It is well known that gonadal recrudescence occurs in autumn and may lead to behaviour characteristic of spring, familiar examples being the autumn song of certain species, such as the Chaffinch, *Fringilla coelebs*, Dunlin, *Calidris alpina*, and the Redshank which may also be seen on occasions performing a partial display flight, while we have recorded elsewhere Continental Song Thrushes, *Turdus ericetorum philomelus* Brehm, carrying out courtship display in this country in autumn, following their migrations.

The present Redshank has therefore taken this autumnal recrudescence a stage further with the assumption of spring plumage and one may postulate a synergistic hormonal activation of the Pituitary, Adrenals and Ovaries to produce the necessary stimulation to bring these changes about.

Such an occurence appears unique in the annals of British ornithology and it was with astonishment we read in *The Times* (10.12.55) that Mr. John Williams, of the Coryndon Museum, had found similar cases this autumn in Kenya. The birds in question included a Greenshank, *Tringa nebularia* (Gunnerus), and a Sanderling, *Crocethia alba* (Pallas), (J. W. *in litt.*). Mr. Williams' comments as they appeared in *The Times* were as follows :—" It makes one wonder if these birds have been in a radioactive area in northern Russia which has somehow affected their moulting sequences. I have no evidence to support this theory, but as far as I can see there could be no other reason." In a subsequent letter (*The Times*, 14.12.55) we made further comment that " If Mr. Williams is right in his theory, then a wide area in the far north must have been affected. Also the dosage must have been low enough to produce a stimulating effect, rather than a larger one which would be more likely to produce the opposite sterilising effect."

Arrangements have since been made for Dr. John Loutit of the Radiobiological Research Unit, the Atomic Research Establishment, Harwell, to examine the bones of any further birds suspected of contamination by radioactivity.

This specimen also supports fully the phenomenon of colour change in plumage without moult. When skinning it, we both searched the inner surface of the skin in vain for any sign of active moult. The mantle and scapular feathers have the black central line and transverse barring partially complete and almost entirely lack the lighter chestnut colouration, which ultimately develops between the transverse barring. Thus, the November Redshank exhibits a state of plumage which is normally seen in March. It is in fact intermediate between winter and summer

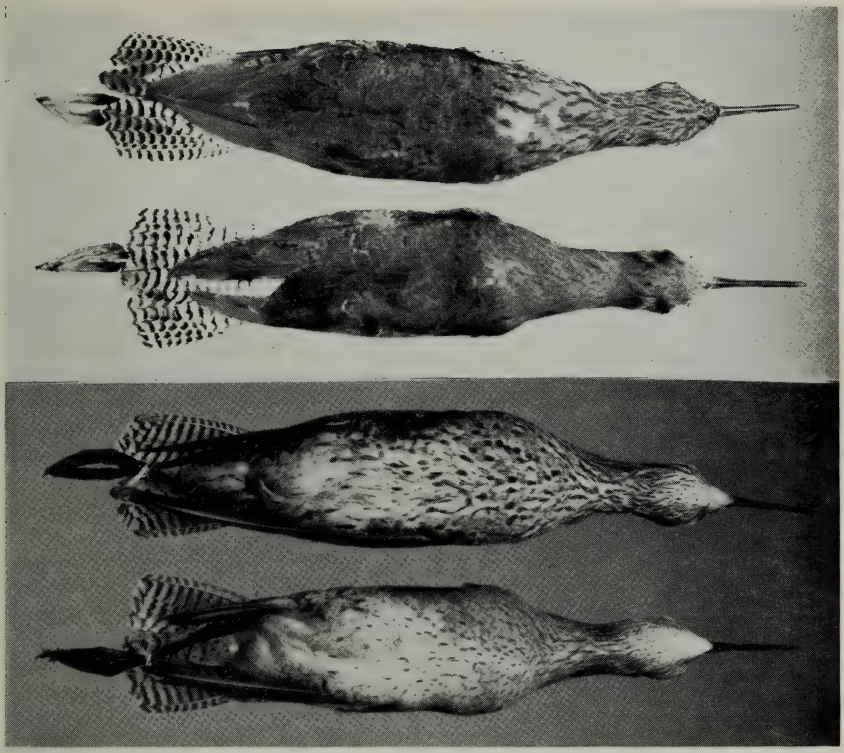

photo: E. Fielder, Sevenoaks.

The two female Redshank collected on 9th November, 1955, showing precocious assumption of summer plumage in the upper bird

dress and those ornithologists who deny colour change in feathers without moult, do not appear to realise that such a plumage exists. Unless this bird is to undergo a second complete moult in spring, it is difficult to understand how it can develop the final transformation into full spring plumage, other than by an intensification of the colour changes already mentioned.

A Summary of the known Geographical Distribution of Mutant "mottled" Rooks, *Corvus frugilegus frugilegus* Linnaeus

by Mr. Bryan L. Sage

Received 10th October, 1955

This subject has been discussed by three authors in recent years (i.e., Fordham 1950, Harrison 1949 and 1950, Mayaud 1950). Since then a certain amount of additional information has come to hand, and it seems

advisable to summarise our existing knowledge of the distribution of this interesting mutation.

Treating the known Continental records in chronological order, we have first the description and plate of a French specimen published by Millet (1828). The plate depicts an apparent adult bird. At one time the accuracy of this plate was in doubt, but subsequent information suggests that it is correct, as it is now known that this condition does in some cases persist into adult plumage. Mayaud (1950) described two other French specimens, one a juvenile and the other in the process of moulting into first-summer plumage. These birds are in the Paris and Nantes Museums respectively. Monsieur Mayaud informs me (*in litt.*) that despite enquiries on the subject he has no record of this mutation occurring in recent years in France. Degland and Gerbe (1867) evidently knew of this mutation on the Continent, and the former evidently had specimens. Their description reads as follows :—

> " Variétés accidentelles ; Cette espèce se présente quelquelfois avec l'extrémité des pennes secondaires, des petites et des moyennes couvertures des ailes tachée. de blanchâtre (Collect. Degland). D'autres fois le plumage est tapiré. Chez quelques individus le bec devient très-long, tres-effilé."

This description is additionally interesting in that it mentions a long tapering bill. This condition has not been observed in any of the specimens of this mutation obtained in this country.

Turning now to the British records, the first mention appears to be that of Hunt (1815-1822). This author mentions a light ash-coloured specimen mottled all over with black, quills and tail feathers barred. This was obviously one of the more extreme examples of the " mottled " mutation. Yarrell (1843) mentions a variety " of a light ash colour most beautifully mottled all over with black, and the quill and tail feathers elegantly barred." He goes on to say that on moulting this bird assumed normal plumage. Irby (1851) mentions a Rook killed in Northamptonshire that was grey on the back and wings, the back being darker than the wings, and also grey on the tail. There is little doubt that this was an example of the " mottled " mutation. Next we have the statement by Hancock (1874), he says that a young bird taken from the nest had the whole of the plumage black, each feather having a greyish bar close to the extremity (i.e., sub-terminal). The bars were wide on the dorsal surface and narrower on the ventral surface. Hancock gives quite a good plate, and the specimen from which this was drawn is probably the one from his collection which is now in the Hancock Museum, Newcastle, labelled " Durham ". This museum also possesses two other " mottled " Rooks from his collection, one has no data and the other is labelled " bought at Weybridge, Surrey, 1880 ". The next author to mention this mutation appears to have been Bolam (1912), who writes " Individuals in which each black feather is barred, or spotted, with one or other of these colours (brown or grey) are less common still, though represented in many collections. I have had, or seen, specimens in this phase of plumage, from several places. They have always been young birds . . ." The same author tells us that in 1899 a young Rook was presented to the Berwick Museum, this bird had each feather of the upper parts barred, or spotted, and tipped with a pale slate colour, and the underparts mottled with the

Mottled Rook

same colour. Bolam traced the history of this bird and found that it had been shot at a small Rookery at Humbleton, near Wooler, Northumberland, in 1896, with some three dozen other similarly marked birds. Another bird had been caught alive and kept for some $2\frac{1}{2}$ years. During this period it moulted several times *but always retained its mottled plumage* (italics mine). The specimen mentioned above was in the Berwick Museum until 1949 when it was then unfortunately destroyed. I have examined three specimens of " mottled " Rooks in the collection of the British Museum (Natural History), they are all juveniles and similar in

appearance to mutant birds from Ashwell, Hertfordshire. They were all obtained in Lincolnshire however, viz., Waithe, May 1902 ; Grainsby, May 1920, and 4th June, 1923. The latter specimen is a female and the remaining two are unsexed. The Cambridgeshire Pest Officer has stated that several " mottled " Rooks were shot at Shepreth about 1949, but none have been seen there since. Full details of the mutants obtained at Ashwell up to 1949 have been given by Harrison (1949). Plate 1 shows a typical mutant bird taken at Ashwell in 1947. Subsequent figures from this locality are as follows :—

1950—no mutants found.
1951—600 young birds examined, 3 mutants with barred wings found, and several brown mutants.
1952—300 young birds examined, no " mottled " mutants found, but one brown type.
1953—400 young birds examined, no mutants.
1954—350 young birds examined, 2 " mottled " mutants, 3 with barred wings and 1 brown type found.
1955—two " mottled " mutants found.

Dr. Harrison also mentions a Kentish specimen in the Maidstone Museum.

There is no point in discussing the genetics of this mutation, there are a considerable number of theories all of which can be made to fit the known facts. Apart from advancing our knowledge of the geographical distribution of this mutation, we have learnt practically all we can from skins. The complex genetical problems that remain will only be worked out by breeding under aviary conditions, or possibly by colour ringing in the field. We do know that the condition is not sex linked and that it is possibly due to a recessive gene(s), gaining expression when in the homozygous state. It has been suggested that at one time all Rooks were mottled, and that a black-plumage gene arose by mutation and eventually became dominant. The " mottling " is thus an ancestral character. It is possible however to postulate that the condition has nothing to do with ancestry, any more than albinism which is also recessive. We do not suppose that the ancestors of animals exhibiting albinism were all albinos. In nature it is rare to find one gene acting alone, more often than not characters are controlled by a group of genes. It will thus be clear that without controlled breeding experiments we can only speculate on the genetics of this mutation.

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The specific status of the Willow Tit

by Dr. D. W. Snow

Received 5th October, 1955.

In *Die Vögel der Paläarktischen Fauna* (1905) Hartert amalgamated the Old World Willow Tits with the New World Black-capped Chickadees *Parus atricapillus* (type locality, Canada), on the grounds that they agreed in the structure of the crown feathers, graduated tail, and " all other important characters " ; and this opinion has been generally accepted. In the course of working through the Paridae systematically, I have however come to realize that there are serious objections to this classification, and it appears that other ornithologists who have recently had opportunities to see both forms in the field are also unconvinced of their specific identity. It is highly undesirable to alter a well-known name without strong reason, but it seems that this is a case where such a change is needed : the nomenclature as it stands obscures the affinities of several well-known birds of wide distribution. I therefore intend, in dealing with the Paridae in the forthcoming continuation of Peters' *Check-list of Birds of the World*, to separate the Old World Willow Tits from *Parus atricapillus*.

Before giving the special arguments, it may be noted that a general resemblance between a Palaearctic and North American bird does not in itself afford sufficient grounds for treating them as conspecific. The taxonomic treatment of such pairs has been inconsistent : some are usually considered conspecific ; others, with apparently equally good claims, are considered as distinct species. In one case where a test is possible, in the genus *Parus*, the generally accepted criterion of reproductive isolation shows that the two are distinct species—*P. cinctus* has occupied part of Alaska, where it overlaps with *P. hudsonicus* and does not interbreed. These two species are, if anything, more similar to one another than are the Willow Tit and Black-capped Chickadee.

First, we may consider the Old World forms of so-called *atricapillus*. These are a diverse assemblage, and include the very distinct *songarus* group in the Tian Shan, southern Mongolia and northern and western China. All, except the *songarus* group, have dull black crowns but otherwise exhibit a great amount of geographical variation, ranging from the olive-brown backed populations of western Europe to the almost white-backed and very long-tailed populations of eastern Siberia. The pale-backed forms are correspondingly pale below and have more extensive white cheeks and paler edges to the wing- and tail-feathers. Variation is clinal almost throughout and there is no doubt of the specific identity of these black-crowned forms. The *songarus* group, originally treated as a separate species, was included in *atricapillus* by Hartert, and this has been accepted by most subsequent authors. These are brown-capped tits, comprising three subspecies, *songarus*, *affinis* and *stotzneri*. *Songarus* is at first sight a very different bird from the typical Willow Tit, with a rusty brown cap and warm brown back, and of very large size ; *affinis* is a greyer bird, but still very distinct, and *stotzneri* is a little greyer still. Since the *songarus* group replaces the typical Willow Tits geographically, in an area where other *Parus* species are represented by sometimes rather distinct but undoubtedly conspecific populations, and

since a similar variation in cap-colour is found in the closely related *P. lugubris*, while several *Parus* species exhibit even greater variation in general colour, Hartert's decision to include them among the Willow Tits is probably correct.

Turning now to *Parus atricapillus* in North America, the following points are relevant. The Black-capped Chickadees vary a good deal geographically, but not nearly as much as the Willow Tits. They differ consistently from the latter in having (as Hartert noted) a much more extensive black bib, drawn out at the corners into a neat triangle, so that the white cheeks are almost separated by the black crown above and the bib below from the pale colour of the sides of the neck and the rest of the body. This gives the head a quite different appearance from that of the Willow Tit, in which, as in the other closely related Old World species, the bib is rather small with an indistinct posterior edge, so that the white of the cheek passes broadly back and merges with the pale colour of the sides of the body and under-parts. In addition the back-colour of the Black-capped Chickadee is olive-grey rather than brown or grey-brown, as in the Old World forms, contrasting with the buff colour of the flanks, whereas in the Willow Tit the flanks are almost the same colour as, but considerably paler than, the back. Finally, the whitish edges of the secondaries (and to a lesser extent the other wing- and tail-feathers) are more marked in the Black-capped Chickadee than in the Willow Tit (when comparison is made between forms with equally dark back-colour).

The importance of these points of difference lies not so much in their mere existence as in the fact that they ally the Black-capped Chickadee more closely to two other New World species, *P. carolinensis* and *P. sclateri*, than to any Old World form. In particular, the American birds all have the same head-pattern, in which they differ from all the Eurasian forms. Moreover, recent work (Lunk 1952, Tanner 1952) has shown that the Black-capped Chickadee and *P. carolinensis* are extremely closely related to one another : they are almost completely allopatric and morphologically very similar, they apparently compete in some places where they co-exist, and there is evidence of occasional hybridization. *P. sclateri*, which does not overlap with either of them, being isolated in mountains in the extreme south of the U.S.A. and Mexico, is merely a large, dark version of the same form. Thus both morphological and distributional evidence strongly suggests that American *atricapillus*, *carolinensis* and *sclateri* have evolved comparatively recently from a common stock.

The evidence from song and calls points the same way. This has recently been discussed in detail by Mayr (1955, and *in litt.*) ; here the main points only need be summarized. Not only is the call of the Willow Tit similar to that of the Black-capped Chickadee—both have the familiar " tchay, tchay " notes—but the song is also rather similar : what has been called the *Brunstpfiff* song of the Willow Tit is probably the counterpart of the " phoebe " song of the Black-capped Chickadee. But the Carolina Chickadee's song and calls are even more similar to those of the Black-capped Chickadee : in particular, its song is a very simple modification of that of the Black-capped Chickadee. Basing his argument entirely on voice, without going into details of morphology, Mayr concludes that the Black-capped Chickadee is closer to the Carolina

Chickadee than to the Willow Tit, and that the latter must be considered to be a separate species.

The relationships between the forms under discussion appear then to be as follows. The New World species, *Parus atricapillus*, *Parus carolinensis* and *Parus sclateri*, are closely allied to one another, replace one another geographically, and are probably monophyletic, but there are good grounds for treating them as separate species. Of the Old World forms, the Willow Tit shows resemblances, particularly in voice, to this group, being most like *Parus atricapillus*, but these resemblances are much less marked than those that the New World species show between themselves. Moreover, some morphological considerations ally the Willow Tit rather more to other Old World species than to the New World group. Clearly the nomenclature as present is misleading, and the Old World Willow Tits must be separated from *Parus atricapillus*. This I propose to do in the forthcoming Check-list, using the oldest available name, *Parus montanus* Conrad 1827 (not Baldenstein, see Corti, Orn. Beob. 44, 1947, p. 68), and including in it, following Hartert, the rather distinct *songarus* section.

I am very grateful to Dr. E. Mayr for sending me a copy of his paper in proof, for criticizing an earlier draft of this paper, and for drawing my attention to the correct name of the author of *Parus montanus*.

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Notes from Central Africa

by Mr. C. W. Benson

Received 20th September, 1955

a. Apalis cinerea alticola (Shelley). Further to my note in "Ostrich", 1952, p. 157, I have since obtained a ♂ and two ♀ from Fife, the type locality, now in the British Museum. I have compared them there with the following material :— seven ♂ and four ♀ from elsewhere in north-eastern Northern Rhodesia; four ♂ and three ♀ from northern Nyasaland; three ♂ and two ♀ from Sumbawanga and eight ♂ and four ♀ from Njombe, in southern Tanganyika Territory. All these specimens appear to be adult. The two ♀ from Fife are as dark brown on the crown as any in this series. There is some variation in this respect, regardless of locality or sex. Captain Grant agrees that *A. c. brunneiceps* Reichenow must now definitely be regarded as a synonym of *A. c. alticola.*

b. Cisticola lateralis vincenti Chapin. A ♂ in the Bulawayo Museum, collected by Major I. R. Grimwood, in the Mwinilunga district, Northern Rhodesia, 30th July, 1951, agrees with the series of this form in the British Museum. See also "Ibis", 1951, p.148.

c. Cisticola pipiens congo Lynes. There are two ♂ in the Bulawayo

Museum, collected by Mr. Smithers, as follows: 13th August, Shangombo, Barotseland, 16° 18′ S., 22° 06′ E., wing 61, tail 64 mm.; 17th August, Santa Cruz (a few miles west of Shangombo, in Angola), wing 60.5, tail 62.5 mm. There is also a ♂ in the British Museum from the Mababe Flats, northern Bechuanaland, 10th August 1909, which extends the known range still further south: wing 61.5, tail 61 mm. This specimen had been placed with *C. galactotes*, but is *C. pipiens*. All three specimens have been compared with a long series, and are clearly *C. p. congo*, which is a well marked race, especially in the bolder mottling on the mantle and scapulars, in both breeding and non-breeding dress, than in *C. p. pipiens*.

d. Prinia flavicans bihe Boulton and Vincent, Bull. B.O.C., 57, 1936, p. 7. White and Winterbottom, in their Northern Rhodesia checklist, 1949, p. 104, record an indeterminate race of this species from the extreme west of the Balovale district. At Mr. White's request I have examined a ♂ and two ♀ collected by him in this locality in August and September, 1945, and now in the British Museum. I have there compared them with some one hundred specimens of *P. f. flavicans* (Vieillot), and the only specimen (the type) therein of *P. f. bihe*, which appears to be a well marked race. White's specimens are not quite so dark above, nor so black on the chest as in this type. The flanks are tinged greyish olive, though not quite to the same extent as in the type, specimens of *P. f. flavicans* showing no such contrast at all. But most marked of all, not mentioned by Boulton and Vincent, is the darker, more lemon tinge of the yellow on the abdomen in *P. f. bihe*. In this character the Balovale birds agree well with that race, with which Captain Grant agrees that they are best placed. Measurements: ♂, wing 56.5; tail 69 mm.: ♀, wing 54, 57.5; tail 69, 75 mm.

A Note on Variation in the Colour of the Legs and Plumage of the Wren *Troglodytes troglodytes troglodytes* (Linnaeus)

by Mr. Bryan L. Sage

Received 12th October, 1955

On 17th September, 1955, at the Panshanger Estate, Hertfordshire, I had under observation for some fifteen minutes, a Wren with bright yellow legs and feet instead of the usual dull brownish-flesh. The bird was normal in every other respect.

As plumage variations in this species are none too common I list below the records that I have in my index:

(*i*) a brood of young Wrens hatched at Sudbury, Suffolk, in 1876 were all of a light cream colour (*The Friend's Quarterly Examiner* 1876, vol. X: 502–511).

(*ii*) one with pied wings seen at Northrepps, Norfolk, on 9th December, 1886, (*Zoologist* 1887: 140–142).

(*iii*) an almost white bird seen at Hickling, Norfolk, on 3rd December, 1896, (*Zoologist* 1897: 128).

(*iv*) a young bird of a uniform cream colour seen near Elstree, Herts, on 13th June, 1906, *Zoologist* 1906: 391).

(*v*) one found dead at Boyland, Norfolk, in January 1911 was nearly three parts white but had normal wings *Zoologist* 1912: 138).

(*vi*) on 15th October, 1920, near Horsham, Sussex, a very pale cinnamon or rufous cream-coloured bird was seen by A. L. Butler (*British Birds* XIV: 143).

A record of symmetrical albinism in the wings of this species was recorded in *Bulletin* B.O.C. 74: 10.

A new race of Dark-backed Weaver from Tanganyika Territory

by Capt. C. H. B. Grant and Mr. C. W. Mackworth-Praed

Received 29th October, 1955.

Symplectes bicolor kigomaensis new race.

Description : Upper parts similar to *Symplectes bicolor amaurocephalus* (Cabanis), but differs from that race in being larger, having a larger bill, and in having the chin and throat black ; throat sometimes mixed black and yellow, not white with dusky bases as in *S. b. amaurocephalus* and from *Symplectes bicolor stictifrons* (Fischer & Reichenow) in having the top of the head and nape brownish black, contrasting with the mantle.

Distribution : Southern Belgian Congo, north-eastern Northern Rhodesia and western Tanganyika Territory.

Type : Male adult. Kazinga, near Kigoma, western Tanganyika Territory, September 27th, 1940. Collector : R. E. Moreau. Collector's No. 5396. Brit. Mus. Reg. No. 1945. 34. 526.

Measurements of type : Wing 86 ; culmen from base 20 ; tail 56 ; tarsus 19 mm.

Remarks : This new race has previously been confused with the Angolan race *S. b. amaurocephalus*. Plate 3 in J F.O., 1880, agrees with Angolan specimens in general colour, size of bill and wing, which is approximately 75 mm. as measured on the plate, which is drawn life-size. No measurements are given in the description.

Wing measurements of eight *A. b. amaurocephalus* are :—

Males 81 to 85, females 75 to 79 and fifteen of *A. b. kigomaensis*, males 85 to 91, females 81 to 86 mm.

S. b. mentalis (Hartlaub), has the top of the head and nape black.

Note on *Oenanthe pileata livingstonei* (Tristram)

by Mr. J. H. Beesley

Received 29th October, 1955

I have been stationed in the Rukwa Valley, south-western Tanganyika Territory, for over three years and have noted that this Wheatear visits this valley from June to November to breed, and is absent between November and June. June to October is the dry season and when the grass is burnt.

I have further noted that this bird frequently sings at night, more especially perhaps when disturbed by grass fires.

A new race of Red-cheeked Cordon-Bleu from Tanganyika Territory

by Capt. C. H. B. Grant and Mr. C. W. Mackworth-Praed

Received 29th October, 1955.

Uraeginthus bengalus kigomaensis new race

Description : Colour above darker earth-brown than *Uraeginthus bengalus schoanus* (Neumann) and *Uraeginthus bengalus ugogoensis* (Reichenow), and below brighter blue. As dark above as *Uraeginthus bengalus katangae* (Vincent), but ear-coverts paler, claret-red as against crimson-red. The female has the flanks blue, not buff-brown as in the female of *U. b. katangae.*

Distribution : Loliondo, Monduli, Lake Eyasi, Biharamulo, Kasulu and Kigoma, north-eastern to western Tanganyika Territory.

Type : Male adult, Kigoma, western Tanganyika Territory, April 26th, 1946. Collector : D. H. A. Bell. Brit. Mus. Reg. No. 1946.85.95.

Measurements of Type : Wing 55 ; culmen from base 11 ; tail 58 ; tarsus 14 mm.

Remarks.: Five males and three females examined, all in British Museum collection.

On a Collection of Birds made by Flight Lieutenant David L. Harrison in Oman, Arabia

PART I

by Dr. James M. Harrison

Received 6th October, 1955.

During his service in the Middle East in 1953-4, Flight Lieutenant D. L. Harrison made a collection of birds in Oman. He was stationed in the Buraimi Oasis area between August 28th and October 8th, 1953 and at Sharjah from April 6th to July 24th, 1954.

Since relatively little is known concerning the birds of this region, the notes which follow will serve to amplify the work of the few others who have visited and published papers on Omanese ornithology.

Although the collection is not a numerous one, of the twenty-two species collected, four are new to Oman and there is also one sub-species not previously recorded for that country. Of the four new species one, the Yellow-throated Sparrow, *Petronia flavicollis transfuga* has previously only been recorded from Iraq, so the present specimen represents its extreme south-westerly range to date.

Some interesting field notes are also recorded by the collector.

Kentish Plover, *Charadrius alexandrinus dealbatus* Swinhoe.

A single specimen of this form of the species was collected on April 16th, 1954 near Sharjah. The bird is an adult female in worn summer dress ; the ovary is considerably enlarged and contained ova of approximately 3mm. in diameter.

De Schauensee and Ripley [1] record the nominate race from Masirah in December and also as the breeding form for Masirah Island in June

and September, while Browne [2] records the species as a common resident in Southern Arabia and also mentions seeing chicks at Masirah.

Guichard and Goodwin [3] collected specimens of the nominate form in December at Sharjah and refer to the species as probably resident on the Oman coast, quoting Cheeseman as having found a nest with three eggs at Oquain on March 29th.

Hartert and Jackson [4] in describing *C.a. dealbatus* write " Differs from *C.a. alexandrinus* in its considerably stouter and longer bill." The measurements quoted give the wing as 109–115 mm., exceptionally as long as 123 mm., Bill generally 16–17 mm. The measurements of the present specimen are as follows :—wing 111.5 mm ; bill (from skull) 21 mm (exposed culmen) 17.5 mm ; tarsus 28 mm, tail 46 mm.

Three female specimens from Japan measure : wing 111 mm. (2), 114.5 mm.; bill (from skull) 20 mm. (2) ; (exposed culmen) 15 mm., 16 mm., 17 mm., tarsus 26.5 mm., 28 mm. (2) ; tail 46 mm., 47 mm., 51 mm.

No opinion upon the status of this form, which is new to Arabia, can of course be advanced since only one specimen from Oman is available. Flight Lieutenant Harrison records that the species is common around Sharjah.

Great Sand-Plover, *Charadrius leschenaultii* Lesson.

Two examples of this species were obtained, the first an adult female on September 14th, 1953, fifteen miles west of Tarif, was shot from a flock of mixed waders, along a shore of sand desert with outcrops of red sandstone, in a belt of low scrub 10 to 50 feet from high water mark. The second is an adult male in worn breeding dress, was collected at Sharjah on June 27th, 1954. Measurements : female, wing 142 mm., male, wing 143 mm.

White-cheeked Tern, *Sterna repressa* Hartert.

Flight Lieutenant Harrison recorded this species as very common off Dubai in June and stated that fewer were seen off Sharjah. An adult female with the ovary moderately enlarged was collected on June 27th, 1954 at Sharjah.

This species was recorded by Browne (*loc. cit.*) during May and June off Masirah Island and a big increase was noted by him between September 13th and 19th with a maximum of between 2000 and 3000. It was also recorded by Dr. C. B. Ticehurst *et alia* [5] at Sir Bu Na Air at the end of May. Measurements : wing, 249 mm.

Little Tern, *Sterna albifrons saundersi* Hume.

This species was found breeding not uncommonly around Sharjah, an adult male being obtained there on May 31st, 1954 and on July 2nd, 1954 ; a fully-fledged juvenile was obtained in the same area.

Meinertzhagen [6] assigns birds found breeding in the southern half of the Red Sea, the Persian Gulf and eastwards to the coast of Sind to this form. The Oman specimens agree perfectly with a series from Sind and are without doubt *S.a. saundersi*.

The juvenile specimen is a curiously pale sandy bird, quite unlike the immatures of the nominate race. This form of the Little Tern was described very clearly by Dr. C. B. Ticehurst [7] and the adult specimen from Oman possesses every distinctive character.

By some investigators *S.a. albifrons* and *S.a. saundersi* are regarded as morphologically very close to one another. In consequence of this considerable confusion exists as to the respective breeding distributions, but it is not clear whether the conclusions on this point are always based upon adequate breeding material or mainly on right records. It would seem therefore not out of place to note some divergent opinions. Meinertzhagen (*loc. cit.*) in addition to the countries already given writes : " Possibly breeds at the southern end of Bahrein Island and certainly at Jedda." Ticehurst[8] remarks " *Saundersi* has been recorded from Fao by Sharpe and is said to breed at Abdulla Banks. Armstrong's bird, which was breeding on the dry mud above high water mark at Fao however, and all Cumming's birds in the B.M. are *m. minuta*." (*S.a. albifrons* Auct.)

Allouse[9] quotes Ticehurst (1926) in recording *S.a. saundersi* as breeding in Abadan and on the small islands at the head of the Persian Gulf, where eggs were found in May and June.

In the investigation of the present Oman specimens, comparison was made between them, the nominate form and *S.a. sinensis*, and also with a strictly comparable series from the Sind coast. By comparison with the former, the Oman adult was seen to be very pale, almost white on the mantle and the juvenile was also remarkably pale. They were also far paler than *S.a. sinensis* from Japan, while exactly matching the Sind series.

It would, therefore, seem desirable to carry out further detailed research on the breeding populations of this species in the Persian Gulf area.

Spotted Sand-Grouse, *Pterocles senegallus* (Linnaeus).

An individual, female by plumage, was collected two miles east of El Ain, Buraimi Oasis on October 2nd, 1953. The party of four from which it was shot was inhabiting a thorn-scrub plain, and these were the only Sand-Grouse seen over a period of six months by the Commanding Officer at Buraimi, Major Peter MacDonald, and the species is considered rare in the district, though probably more abundant in winter. The specimen is in full moult.

[*to be concluded*]

- FEB 1956
PURCHASED

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DINNERS AND MEETINGS FOR 1956

21st February, March joint with B.O.U. 17th April, 15th May, 18th September, 16th October 20th November, 18th December.

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If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

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The Committee have decided that in future the Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions up to 1,500 words on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

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BULLETIN
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The five hundred and forty-sixth meeting was held at the Rembrandt Hotel, South Kensington, on Tuesday, 21st February, 1956, following a dinner at 6.30 p.m.

Chairman: Mr. E. M. Nicholson.

Members present: 27; Guests 5; Guest of the Club: Mr. I. C. T. Galbraith; Total: 33.

Possible Irradiation in Birds

Dr. James M. Harrison exhibited a second Redshank showing incipient summer plumage in winter. Minimal signs of radioactive contamination was found by Dr. John Loutit's department at Harwell and a graph demonstrating this was shown to members. Dr. A. J. Marshall reported on the ovary and oviduct that the development was rather in advance of what he would have expected in a normal wintering bird. While the full significance of these findings must await controlled experiments, it was felt that they should be placed on record and a paper will appear in a subsequent *Bulletin*.

The Birds of San Cristoval, British Soloman Islands

Mr. I. C. T. Galbraith gave a most interesting talk illustrated by slides of his recent expedition. He stated that the avifauna has close affinities to that of New Guinea, and described the various habitats, stressing the remarkable geographical variation. This included repression of sexual dimorphism in certain species and size variations affecting both general and regional characters. He stressed the probable different geological origin of San Cristoval and Guadalcanal, the thirty miles separating them representing a faunal break. Guadalcanal has 95 species, San Cristoval 72, but there are only 36 forms common to both.

The relationship of *Passer griseus* (Vieillot) and *Passer diffusus* (Smith), with the description of a new race of the latter

by Mr. C. W. Benson

Received 12th October, 1955

During a tour of the Luangwa Valley, Mpika district, Northern Rhodesia, in June 1954, I collected a series of Grey-headed Sparrows which were immediately distinguishable from the sparrows with which I was already familiar, associated with villages at Kasama and elsewhere in the plateau country to the north-westward. In particular, these Luangwa sparrows had much smaller bills than the plateau birds, and the mantle greyer, less rufous in tone, the rufous on the shoulder therefore showing up in contrast. The difference in the size of the bill was noticed even in the field, before any specimens had been collected. They were only found in the *Mopane* woodland, the predominant vegetation type in the Luangwa. It was also particularly interesting that, later in the same tour, large-billed birds like those of the plateau country were seen and collected in the same area as the small-billed birds, but in native villages, not in the *Mopane*.

My experience in the Luangwa has led me to an examination of all the specimens of Grey-headed Sparrow in southern Africa from Angola, Northern Rhodesia, Nyasaland and Portuguese East Africa southward in the British Museum. Time did not permit a general examination of material from any further north, in this or any other museum. Mr. R. H. N. Smithers, the Director, also very kindly loaned all the specimens in the National Museum of Southern Rhodesia, Bulawayo—some ninety from Northern and Southern Rhodesia, and a few from Nyasaland, Portuguese East Africa and Bechuanaland. Colonel R. Meinertzhagen has allowed me to examine several specimens in his collection. I must also thank Dr. J. M. Winterbottom for the loan of nine specimens in the South African Museum, collected by Dr. F. O. Stoehr. In all, over two hundred specimens have been available.

Differences analogous to those in the Luangwa were at once apparent in specimens in the British Museum from western Angola, a series from Benguella, Catumbella and Ndalla Tando being large-billed, with mantle rufous, but others, from Huxe, Loanda and Dondo small-billed, with mantle greyer, and the rufous on the shoulder showing up in contrast. As in the Luangwa, there is a geographical overlap.

On the evidence of the Luangwa and western Angola specimens, it seems wise to recognise two species in southern Africa, *Passer griseus* and *Passer diffusus*. Where they occur together, *P. griseus* is probably confined to the vicinity of human habitations, *P. diffusus* to virgin woodland. Considering their distributions as a whole, *P. diffusus* seems to frequent drier country than does *P. griseus*. In the Luangwa, conditions are certainly more arid than they are on the neighbouring plateau country to the west and the east. This is a further instance of a relatively dry country species apparently having the limit of its north-eastern distribution in the Luangwa Valley. Other examples are the sandgrouse *Eremialector bicinctus* and the warbler *Eremomela usticollis*. Conditions are also relatively dry where *P. diffusus* occurs in western Angola: see Serle, "Ibis", 1955, p. 425.

Passer griseus and *P. diffusus* have usually been regarded as conspecific, see for example Sclater, Syst. Av. Aethiop., 2, 1930, p. 725. But there is nothing very novel about my proposal. Thus Chapin (1954) is "led to wonder whether *diffusus* and *georgicus* are rightly referred to *griseus*". And Mackworth-Praed and Grant (1955) recognise *P. griseus* and two very similar species further north in Africa.

It must be emphasised that the situation may not everywhere be so straighforward as it appears to be in western Angola and in the Mpika section of the Luangwa Valley. The two species are no doubt derived from a common stock. *P. griseus* was perhaps evolved in relatively high rainfall country in western Africa, *P. diffusus* in the drier conditions of southern Africa. They have now met in a few places, and, as in the Mpika section of the Luangwa Valley, where the human population is sparse, not yet started to fuse. But as the human population increases, and more and more of the original woodland is destroyed, this may be expected to occur.

In arranging the various forms set out below, it should be remembered that colour-differences are only easily discernible in adult specimens in fresh dress. Badly worn adults are placed where they appear to belong on size of bill or on geographical grounds, while juveniles are ignored. All culmen measurements are from base of skull. Measurements are only separated by sexes where it seems certain that there has been no mis-sexing.

1*a*. *Passer diffusus diffusus* (Smith).

Pyrgita diffusa A. Smith, Rep. Exped. C.Afr., p.50, 1836: north of the Orange River. Mantle greyish brown. Small-billed, culmen 11–13 mm. Wing 75–87 mm.

Range and material examined: Northern Cape Province, 1; Transvaal, 6; Bechuanaland, 4; Southern Rhodesia, 23; south-western Northern Rhodesia north to Mongu and north-east to Mazabuka, 10; Portuguese East Africa between Tambara, Tete and Chicowa, 10; Fort Johnston, Nyasaland (?), 1.

Remarks: Three of the Bechuanaland specimens are from Gaberones and Mahalapye, in the east of the territory. The fourth is from Maun, 20° S., 23° 25′ E., further west. Although it is best placed with *P. d. diffusus*, *P. d. georgicus* Reichenow may extend into western Bechuanaland. Some Northern Rhodesian specimens are rather markedly pure grey, less brown, on the mantle, but without further material it is not possible to decide whether the difference is constant enough to warrant their separation by name. The Fort Johnston bird is in the British Museum, reg. no. 1946. 5.827. It is an adult male in rather worn dress: wing 81, culmen 12, bill black. It does not differ in colour from other adults in worn dress of *P. d. diffusus*. But the situation at Fort Johnston, where *P. griseus* certainly occurs, requires further study. Conditions are not dissimilar to those in the Luangwa Valley. *Mopane* woodland is found to some extent.

1*b*. *Passer diffusus stygiceps* Clancey.

Passer griseus stygiceps Clancey, Durban Mus. Novit., 4 (9), 1954, p.116: Umzinyati Falls, Inanda, near Durban. Differs from *P. d. diffusus* in being darker on the crown, mantle and rump, and by the duller grey of the breast and flanks, which are suffused with buffish.

Range and material examined: Natal, 4.

Remarks: One specimen is merely labelled "Natal". The others are

from Ingagana River, near Newcastle; Weenen; and Mooi River. This latter, in the Meinertzhagen collection, in fresh dress, is in fact as pale on the mantle as in *P. d. georgicus*. None of these specimens are topotypical of *P. d. stygiceps*, and I am not therefore in a position to comment on this race.

1*c*. *Passer diffusus georgicus* Reichenow.

Passer griseus georgicus Reichenow, Vög. Afr., 3, 1904, p.231: Damaraland. Differs from *P. d. diffusus* in being paler on the mantle.

Range and material examined: South-West Africa, 7; western Angola, 6.

Remarks: Specimens examined from Otyimbingwe; Omaruru; Elephant Vlei; Huxe, 12° 40′ S., 13° 23′ E.; Dondo, 9° 45′ S., 14° 30′ E.; Loanda, 8° 50′ S., 30° 13′ E. The six from Angola, collected by Dr. W. J. Ansorge and Mr. W. P. Lowe in 1905–11, are rather small, having wing 73–81, culmen 11.5–13 mm., compared to wing 79–86, culmen 12.5–13 mm. in the Damaraland specimens.

1*d*. *Passer diffusus luangwae*, new race.

Differs from *P. d. diffusus* in being warmer brown on the mantle, with a clearer division from the grey of the crown and nape. Measurements also rather smaller.

Range: Only definitely known from the Luangwa Valley, to the west of the Luangwa River, in the Mpika district, Northern Rhodesia, between 11° 45′ S. and 12° 37′ S.

Type: In the British Museum. Adult ♂. Mupamadzi River, Luangwa Valley, Mpika district, Northern Rhodesia: 12° 37′ S., 32° 07′ E. 21st June 1954. Collected by Mr. C. W. Benson. Collector's No. NR 3397. Brit. Mus. Reg. No. 1955.41.3.

Measurements of type: Wing 77, tail 59, culmen 11, tarsus 18 mm.

Remarks: Seven ♂ have wing 74–82, average 77.5 mm.; culmen 10.5–11.5 mm.: seven ♀, wing 72–79, average 75.5 mm.; culmen 10–12 mm. A specimen collected for Major W. E. Poles, sexed as a ♀, wing 83, culmen 11.5 mm., is probably a ♂. Twelve specimens collected by me in June showed no gonad activity. Nor is there any evidence of activity in Poles' bird, dated 29th July. But a ♀ collected by Dr. S. A. Neave on 11th March was captured on its nest. This specimen and another collected by Neave on 14th March have bills black. But all the others have it pale fleshy, the culmen tending to sepia. Probably in *P. diffusus* as a whole the bill is only black during the breeding season, but the large series of *P. griseus ugandae* which I have examined suggests that there is no seasonal change, though young birds have the bill sepia, usually darker than in young or non-breeding *P. diffusus*. In *P. d. luangwae* it is noticeably paler than in any specimen of *P. g. ugandae*. Neave's two specimens of *P. d. luangwae* are labelled "Upper Luangwa", and are so recorded "Ibis", 1910, p. 242. It is impossible to determine where exactly they were collected. A specimen from Kankomba, Lundazi district, 11° 40′ S., 32° 30′ E., not included above, is also apparently this form, even although it has culmen as long as 12.5 mm.

2*a*. *Passer griseus ugandae* Reichenow.

Passer griseus ugandae Reichenow, Vög. Afr., 3, 1904, p. 231: Uganda. Differs from the species *Passer diffusus* as a whole by its larger bill, culmen usually 13–15.5 mm., and mantle rufous rather than grey in tone, the

rufous on the shoulder therefore not showing up in contrast. In areas of overlap with that species, wing also rather longer; and probably associated with human dwellings in all such areas rather than virgin woodland.

Range and material examined: Western Angola (Benguella Town, Catumbella and Ndalla Tando), 16; Middle Zambesi (Chicowa-Zumbo—Victoria Falls) and Lower Luangwa to as far north as 14° 32′ S., 10; Kafue River (railway crossing), 2; Luangwa Valley, Mpika district (alongside *P. d. luangwae*), 4; north-eastern Northern Rhodesia (Mpika north to Kawambwa, Abercorn and the Belgian Congo boundary), 35; eastern Northern Rhodesia (Fort Jameson and Lundazi), 4; Nyasaland, 17. According to Chapin (1954) and Mackworth-Praed and Grant (1955), who I follow in assigning all this material to *P. g. ugandae*, this form extends north to the Sudan and the Gold Coast.

Remarks: Ten ♂ from western Angola, collected by Dr. W. J. Ansorge in 1905–8, have wing 80– 87, average 83.6 mm., culmen 13.5–15 mm.; five ♀ wing 79–83, average 81.0 mm., culmen 13–15 mm. These are evidently the form described by Gyldenstolpe, Bull. B.O.C., 43, 1922, p. 33 as *P. g. zedlitzi*. He gives the wing as 80–86 mm., so that they cannot be referable to *P. diffusus* from that area. They seem in fact identical with material from further east. Ten ♂ from north-eastern Northern Rhodesia personally sexed by me have wing 80–87, average 84.2 mm., culmen 14–15 mm.; likewise nine ♀, wing 79–83, average 80.2 mm., culmen 13–14.5 mm. Specimens collected by me between late December and mid-May were in breeding condition. Three ♂ from alongside *P. d. luangwae* have wing 80, 85, 86, culmen 15, 15.5 (two) mm.; one ♀, wing 81, culmen 15 mm. Specimens from eastern Northern Rhodesia and Nyasaland have wing 77–90, culmen 13–16 mm. Those from the Middle Zambesi and lower Luangwa are not easily separated from the Portuguese East Africa series, assigned above to *P. d. diffusus*. However, on the average the former are rufous rather than grey on the mantle. Comparative measurements of the two series are: *P. g. ugandae*, wing 79–86, average 82.4 mm.; culmen 12–14, average 12.9 mm.: *P. d. diffusus*, wing 78.5–86.5, average 81.6 mm.; culmen 12–13, average 12.5 mm. There is thus very little difference in measurements. It may be that in this area some fusion between the two species has occurred. The situation is well worthy of further investigation . The two specimens from the Kafue River, in the Meinertzhagen collection, are typical *P. g. ugandae* in colour, and both with culmen 14 mm. Due to the courtesy of Dr. H. Schouteden, I have been able to examine some ninety specimens from widespread localities in the southern Belgian Congo, south of 5° S., in the Congo Museum, Tervuren. There were no *P. diffusus* among them, and all appeared to be *P. g. ugandae*. And Dr. R. Verheyen has kindly allowed me to examine the series recorded by him (1953) as *P. griseus diffusus*, from the Upemba National Park. Certainly none of these either are *P. diffusus*, and allowing for age and wear I consider that they also are *P. g. ugandae*.

2*b*. *Passer griseus mosambicus* van Someren.

Passer griseus mosambicus van Someren, Bull. B.O.C., 41, 1921, p. 114: Lumbo, northern Portuguese East Africa. Differs from *P. g. ugandae* in being darker above, especially on the mantle, which is more brown, less rufous. Rather darker grey below.

Range: Sea-littoral of northern Portuguese East Africa, and according to Chapin (1954), north to the Pangani River.

Remarks: Five specimens examined, from the Lurio River mouth and Netia. Two in fresh dress from the former locality show the characters given for this race quite well. In the absence of more extensive material, I think it should be recognised.

Mention must also be made of *Passer suahelicus* Reichenow, regarded by Mackworth-Praed and Grant (1955) as a monotypic species; see also Bull. B.O.C., 64, 1944, p. 36. This is very like *P. d. diffusus* in the colour of the upperside, but with less contrast between the grey of the crown and nape, and the greyish brown of the mantle. It has a heavier bill, not distinguishable by measurements from *P. griseus ugandae*. Mackworth-Praed and Grant (1955) record it from Northern Rhodesia and Portuguese East Africa, but with the further material now available it is clear that the specimens on which this is based are *P. d. diffusus*. I have examined four specimens of *P. suahelicus* from the Rukwa area (where Mr. D. Vesey-FitzGerald has collected both this and *P. griseus ugandae*), two from Iringa, and one each from Nou in the Mbulu district, Shinyanga and the Loita Plains in south-western Kenya. Like *P. diffusus*, it seems on the whole to be confined to drier country than *P. griseus*. On colour it might well be treated as conspecific with *P. diffusus*.

I am indebted to the following for advice:— Captain C. H. B. Grant, Mrs. B. P. Hall, Miss G. M. Rhodes, and Mr. C. M. N. White, M.B.E. The latter made valuable suggestions in regard to the origin of the two species.

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Mackworth-Praed, C. W., and Grant, C. H. B., 1955. Birds of Eastern and North Eastern Africa, 2. London.

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A Case of Avian Tuberculosis in a Wild Wigeon

by Dr. Keith Randall and Dr. Jeffery G. Harrison

Received 30th October, 1955

In searching the literature, we were surprised to find so few references to tuberculosis in free-living wild duck. There is, in fact only one confirmed case, in an American Wigeon, *Anas americana* Gmelin, which was shot at Cowichan Bay, British Columbia, and reported by Cowan [1]. It was an advanced case with involvement of most of the viscera, but no details are given regarding typing. The only other reference we can trace is of a case of presumed tuberculosis in a Grey Teal, *Anas gibberifrons* (Müller) from the Culleval Lake, New South Wales, Australia in May 1952 [2]. This bird had lesions in the liver, spleen, intestines and mesentery in which numerous acid-fast bacilli were demonstrated, but unfortunately no culture could be made as the organs were received in formalin by the author. Our own case therefore is the first in a free-living wild duck in Britain or Europe.

The bird was an adult drake in perfect, normally coloured full plumage and was found by Mrs. Marion Jones, wife of the Secretary of the Kent Wildfowlers' Association, beside a loch on South Ronaldsay in the

Orkney Islands on June 3rd, 1955. It was weak, unable to fly and extremely wasted. We noticed that it had a rapid respiration rate and that its right wing tended to droop. In view of this and the date, we assumed that the bird was more likely to be diseased than pricked, and it was therefore killed, the skin being preserved in J. G. H.'s collection and the body dissected for pathological investigation.

The findings were as follows :—many large yellowish, caseous-looking nodules were present in both lungs and in the thoracic and cervical air-sacs. In addition, the lungs showed marked secondary collapse. Similar large nodules were present in both shoulder joints, which were in the process of destruction by this abnormal tissue. A further lesion was present in the left biceps and others were found on the peritoneal surface of the liver. The state of pneumatisation of the skull was normal compared with other Wigeon of similar age and there was no vascular engorgement. This may indicate that the disease had a fairly rapid onset and spread.

Sections from the lung, left shoulder joint and left biceps were stained by Haematoxylin and Eosin and Ziehl-Neilsen methods.

In the lung were seen numerous characteristic miliary caseating tubercles, surrounded by a zone of large pale histiocytes and an occasional Langhan's giant cell. The intervening lung tissue in the material examined showed collapse only—no broncho-pneumonic spread of the disease was seen.

In the shoulder joint there was gross caseous necrosis destroying the bony tissue and producing a characteristic cellular response. The lesion in the muscle was well circumscribed with a large caseous centre and similar granulation tissue surrounding it. In all slides, very large numbers of small, pleomorphic acid-fast bacilli were identified in the Z-N stained films.

Material for culture came from the shoulder joint. Growth occurred moderately well on Loewenstein-Jensen and Finlayson's media after 3–4 weeks as a smooth, homogeneous culture. Sub-cultures were sent to Dr. A. McDiarmid (Agricultural Research Council Field Station, Compton), who found it to be a typical smooth avian strain, being fully virulent for Rabbits, producing a typical Yersin reaction with death in three weeks.

Antibiotic sensitivity tests have been carried out using Loewenstein-Jensen slopes having the various strengths of antibiotic incorporated in the media. This strain was found to be sensitive to 3μg Streptomycin, but resistant to 100 μg. Para-amino-salicylic acid (PAS) and to 100 μg. Iso-nicotinic acid Hydrazide.

This suggests that, for this strain at any rate, Streptomycin might be of therapeutic value, but that the other two antibiotics would not help.

Discussion. This case shows a rather unusual distribution of lesions, as the great majority of wild birds appear to become infected by way of the alimentary tract[3]. Bacilli are passed in the droppings, later to be eaten by another bird.

This Wigeon appears to be a case of primary respiratory tuberculosis, with blood-borne spread to the skeletal system and peritoneal surface of the liver. Skeletal tuberculosis is rare in wild birds, but Dr. James M. Harrison[4] has described another case in a Sparrow Hawk, *Accipiter*

nisus nisus Linnaeus, in which a shoulder and knee were infected, in addition to the deltoid and pectoral muscles. The lungs and air-sacs, like the Wigeon, were also infected and the shoulder was thought to have become involved by direct spread via the air-sac system to the parietal surface of the sternum and thence to the axillary.

The occurrence of a case of avian tuberculosis occurring in a Wigeon in the Orkneys indicates that the disease is probably endemic in those islands. The chicken population is the highest per acre for any county of Scotland[5] and in 1950 egg exports reached five million dozen. Chicken are known to be susceptible to this disease, some investigations in Germany and the U.S.A. putting the incidence between 5–7%[6]. Dr. D. S. Barbour of the Animal Health Division, Scottish Ministry of Agriculture tells us (*in litt.*) that the incidence of clinical tuberculosis in Orkney is low however, as the domestic fowls are well culled and not kept beyond the second year. It has been noted that the tuberculin testing of cattle in Orkney reveals a high incidence of non-specific reactions, which may be due to a mild residual infection of avian tuberculosis on heavily stocked land. In 1948, a veterinary officer investigating an outbreak of tuberculosis on a farm in Orkney discovered a Lapwing, *Vanellus vanellus* Linnaeus, which had died of tuberculosis of the liver and in 1954 a domestic duck was also shown to have the disease.

It seems reasonable to suggest that the Wigeon contracted the disease in the spring of 1955, when this species of duck in particular is so very fond of grazing the fresh young grass, a habit which would bring it on to ground infected by chicken. The mycobacteria excreted by birds can survive for long periods in the soil, before entering another bird.

Major-General C. B. Wainwright has told us of a female Wigeon which he found dead on November 24th, 1950 and which was suspected of tuberculosis. A post-mortem was performed by the Zoological Society of London on behalf of the International Wildfowl Research Bureau, to whom General Wainwright sent the duck. The report was of tuberculosis of the lungs and air-sacs. In the mortality files of the I.W.R.B. the Director, Dr. E. Hindle, has written " unsatisfactory " against this record and we noted that the file refers to two Wigeon which is undoubtedly wrong, as a second Wigeon sent by General Wainwright at the same time was reported to him by the Zoo as having been shot. Acid-fast organisms were found in the first Wigeon and there is a note that these were sent to the London School of Hygiene and Tropical Medicine for culture and typing. Professor E. T. C. Spooner has very kindly been through all the records at the School, but can find no trace of the Wigeon culture. It is unfortunate that this case was incomplete, as it could have proved of much interest. The similarity with our case is remarkable and there may prove to be more than just coincidence in the fact that the species was also a Wigeon and that the only other proved case was in an American Wigeon.

Dr. E. Hindle has told us (*in litt.*) of an epidemic in Mute Swans, *Cygnus olor* Linnaeus, which occured at Possil Marsh, near Glasgow in 1936. He went to the marsh " where a large number of dead swans were lying about and there were also many sick birds. I caught up two of these, both immatures, and brought them back to the University and they reported that the birds were suffering from avian tuberculosis." This interesting observation is the only other record we have traced of

tuberculosis in free-living wildfowl and it appears therefore that epidemics can occur at times, although the Mute Swan is perhaps more a semi-domestic than a genuine wild fowl.

The incidence of tuberculosis in wildfowl in captivity indicate that in all probability no species is immune. The Reports of the Wildfowl Trust give avian tuberculosis as the cause of death in a New Zealand Scaup, *Aythya novae-seelandiae* (Gmelin) and African Yellow Bill, *Anas undulata undulata* (Du Bois)[7], and two Red-breasted Mergansers, *Mergus serrator* Linnaeus[8], while one of us (J. G. H.) has recently preserved an adult Pink-footed Goose, *Anser arvensis brachyrhynchus* (Baillon), from the Trust collection, which had died of this disease.

The results of the sensitivity tests suggest the possibility of treating infected birds, especially where such excessively rare and valuable species as the Hawaiian Goose, *Branta sandvicensis* (Vigors,) are now being conserved in captivity, as at the Wildfowl Trust. Diagnosis may well prove possible in a bird with a wasting disease by identifying the acid-fast organisms in the droppings, except in the minority of cases which are not alimentary. The main differential diagnosis is between this and an Aspergillosis infection. Mr. J. V. Beer[9] is developing a new swabbing technique at the Wildfowl Trust for its detection and as the disease is respiratory, it may also prove applicable to cases of respiratory tuberculosis. X-ray examinations may also prove helpful in the differential diagnosis. Dr. James M. Harrison published several characteristic films of the tuberculous Sparrow Hawk[4], which revealed a distribution of lesions which could not have been due to Aspergillosis.

Treatment of avian tuberculosis would appear possible by intramuscular injections of Streptomycin, the massive pectoral muscles being a suitable site, the dose being calculated on a body weight ratio. It would seem essential for treatment to start without waiting for the diagnosis to be confirmed, owing to the time taken over the laboratory investigations, and the fact that the disease probably runs a fairly rapid course. Research on these lines should prove of much interest and will have a practical application.

Summary : A case of confirmed avian tuberculosis is described in a Wigeon. It is the first time the disease has been demonstrated in a free-living wild duck in Europe, and only the second on record.

Sensitivity tests with the three main antibiotics used in the treatment of human tuberculosis suggest the possibility of treating tuberculous wildfowl with Streptomycin.

Acknowledgments :—Dr. A. McDiarmid, of the Agricultural Research Station, Compton, has been the greatest assistance to us in typing the organism and in discovering references. We are also most grateful to Dr. D. S. Barbour, Miss P. Barclay-Smith, Mr. J. V. Beer, Mr. J. Davidson, Dr. E. Hindle, Dr. Osman Hill, Mr. Peter Scott, Professor E. T. C. Spooner and Major-General C. B. Wainwright for their advice and help. The Pathological Laboratory staffs at Orpington and Sevenoaks Hospitals have assisted us in all the investigations.

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On a Collection of Birds made by Flight Lieutenant David L. Harrison in Oman, Arabia

PART II

by Dr. James M. Harrison

Received 6th October, 1955.

Striated Scops Owl, *Otus scops brucei* (Hume).

A female of this species was shot at El Ain, Buraimi Oasis on September 6th, 1953. This species was not recorded by de Schauensee and Ripley (*loc. cit.*) ; Meinertzhagen (*loc. cit.*) refers to it as known in Arabia from three specimens, one from Buria, January 19th, one from Madriga, November 1st and the third from Asir on March 27th, though he states that they were fairly common in all these localities. This is the first record of this owl for Oman. Wing measurement = 149 mm.

Nightjar, *Caprimulgus europaeus europaeus* Linnaeus.

A specimen of the nominate form of the Nightjar was collected at El Ain, Buraimi Oasis on 29th September, 1953. The bird is a first winter male and has rounded whitish-ochraceous spots on the outer primaries, which do not reach the shafts.

Grant and Praed[10] have called attention to the fact that neither on colour nor on measurement can the race *C.e. meridionalis* be upheld. In investigating thc Oman specimen, the one point which was very apparent was the overall darkness of the populations of this species in the Iberian peninsula. In this respect, it was unfortunate that Hartert[11] chose Greece as the "terra typica" of the race, where the birds are not only not invariably smaller, but are almost invariably on colour like the nominate birds. Had he selected the Iberian peninsula or N. Africa, I think the race could have been upheld on colour alone.

In discussing this species Johansen[12] refers to the race *C.e. sarudnyi* Hartert, which its author states to be equally as dark as the nominate form, and possessing as a diagnostic character, the large white spot on the first primary, stating also that it is intermediate in size between the nominate race and *C.e. unwini*. Quoting Spangler (*Birds of the U.S.S.R.*, Vol. I.) Johansen gives as the distribution of *C.e. sarudnyi* the whole of Turkestan, restricting the form *C.e. unwini* to the Himalayan region.

It would seem that *C.e. europaeus* conforms to the cline concept and is darkest in the extreme west becoming paler and greyer in the east. Birds

from the Balkans and from Czechoslovakia are both in size and colour very close to *C.e. sarudnyi*, though lacking the large white spot on the first primary, the character described by Hartert (*loc. cit.*) for that race.

The Oman specimen in general colour matches many of the eastern birds, but it lacks the large white spot on the first primary. It is only a trifle paler and greyer than the Balkan and Czechoslovak specimens. It is also questionable whether *C.e. sarudnyi* can be precisely geographically related. As a racial character in the *C. europaeus* group the white primary spots are also not entirely reliable, and I have at least one British breeding bird, a very typical *C.e. europaeus* in every other respect, except that the white spots on the outer primaries are extensive on all three, that on the first reaching up to the shaft, and even involving both vanes of the second and third primaries in both wings. It is clear that there must be a considerable interchange of genes between the populations in southern Europe east of the Iberian peninsula and south-western Asia, as well as between populations of south-west Asia and those of the territories to the north and eastwards as far as the Yenesei. In this vast area, which is accredited as the breeding distribution of *C.e. europaeus*, there must be very many intergrading individuals, some in the east no doubt showing trends towards *C.e. unwini*, the so-called *C.e. sarudnyi*, others inclining to the nominate form and others resembling the race *C.e. meridionalis* in its more typical characterisation as exemplified by the populations of N. Africa and the Iberian peninsula.

It is upon these considerations that the Oman specimen has been referred to the nominate race.

This species is not recorded by de Schauensee and Ripley (*loc. cit.*) nor by Goodwin and Guichard (*loc. cit.*). Meinertzhagen's (*loc. cit.*) only Arabian record is of one obtained at Azraq on October 28th. The present specimen represents a new record for Oman. Wing measurement = 192 mm.

Bee-Eater, *Merops apiaster* Linnaeus

de Schauensee and Ripley (*loc. cit.*) record seeing the Bee-Eater once only when a male was seen at As Sib. Meinertzhagen (*loc. cit.*) states that it has occurred at Muscat in April.

A specimen, an adult was obtained on 25th September, 1953 at Sharm, where several were seen on that day.

Little Green Bee-Eater, *Merops orientalis muscatensis* Sharpe

There is some doubt as to the validity of this form, particularly in view of the remarks of Guichard and Goodwin (*loc. cit.*). Only a single specimen was collected, an adult in full moult, at Buraimi Oasis on 5th September, 1953. This bird has a bill measurement from the skull of 30.5 mm. and an exposed culmen measurement of 24 mm.

The species is recorded by de Schauensee and Ripley (*loc. cit.*) from Muscat, Danta, Mutrah and Hajer. Guichard and Goodwin (*loc. cit.*) found it at Sharjah in December and February and Buraimi in January.

Finch Lark *Eremopteryx nigriceps affinis* Blyth

Unfortunately only a single specimen of this species was collected. This is by plumage an adult male, and was shot on 17th September, 1953 at El Ain, Buraimi Oasis. On 21st April, 1954 a small party was seen beyond Jebal Faiyah on the way to the Wadi Khor. The specimen agrees well with a series from southern Arabia and India and I agree fully

with Meinertzhagen (*loc. cit.*) in uniting *E. n. sincipitalis* Blyth and *E. n. affinis* Blyth.

Crested Lark *Galerida cristata altirostris* Brehm

An adult male was collected on 21st September, 1953 at El Ain, Buraimi Oasis. This species was stated to be not uncommon in the area.

Bifasciated Lark *Certhilauda alaudipes doriae* Salvadori

An adult female and a juvenile were collected, the former on 21st April, 1954 at Oad el Matina, the latter on 2nd June, 1954 at Sharjah. The adult, in which the ovary was moderately enlarged, is within the individual variation of *C. a. doriae*, although a trifle sandier than typical examples of that form. On measurement it is also within the range of *C. a. doriae*. The juvenile is of the same pale greyish sandy brown as the adult.

This species is not recorded by de Schauensee and Ripley (*loc. cit.*), but Browne (*loc. cit.*) records seeing a party of five near Masirah in June. The adult Oman specimen was collected in a terrain of sand-desert with a considerable growth of tufty grass and scrub, and was stated to be not uncommon, but was always flushed singly.

Desert Lark *Ammomanes deserti* ? ssp.

An example of the Desert-Lark was collected at Buraimi Oasis on 20th August, 1953. Its sex was indeterminable. This specimen has been compared with the following races : the nominate ; *A. d. samharensis*, *isabellinus*, *saturatus*, *cheesemani*, *cozi* and *azizi*. On its general characters it is nearest to *A. d. deserti*, although not quite identical, being a little less grey and a trifle paler and sandier than the majority. From all the other races mentioned it was well differentiated. As already indicated the Buraimi specimen is very close to the nominate race, and it is in fact almost identical to a specimen, a male, in the British Museum series collected on the Burida Pass, 140 miles S.S.W. of Kalat, Pakistan on 30th August, 1933, a parallel date with the Oman specimen. Recently de Schauensee and Ripley (*loc. cit.*) have separated the Desert-Larks of Oman, east of the Jebel Al Akhdhar, in the Muscat district, as *A. d. taimuri*, and describe the birds as being closest to *A. d. saturatus* Ogilvie Grant. The general description of this form is that of " an exceptionally dull-coloured greyish race of *Ammomanes deserti*."

Meinertzhagen,[13] in dealing with this species stresses the extreme variability of all populations, and has placed in the synonomy under the nominate form the races *phoenicuroides*, *fratercula*, *parvirostris*, *orientalis* and *katherinae*. With such a variable species, it is clear that considered opinions will always be at variance, see for instance Dementiev *et alia*,[14], Vaurie[15] and Bates[16].

It is clear, on geographical considerations that there must be an appreciable intergradation between some of the forms described, which doubtless explains the difficulty of the choice between, as Meinertzhagen so aptly puts it " atom splitting " and " dough lumping ", in a species presenting a peculiarly sensitive susceptibility of relationship between soil colouration and individual variation.

Measurements of the Oman specimen : Wing 102 mm, bill (from skull) 16.5 mm, (exposed culmen) 15 mm., tarsus, 23 mm., tail 62.5 mm.

Yellow-vented Bulbul *Pycnonotus capensis xanthopygos* (Hemprich and Ehrenberg)

The earliest record for this species for Arabia appears to be that of

Sharpe[17], who mentions two adult specimens from Muscat, which he states " will probably be found to be about the extreme eastern range of the species " ; de Schauensee and Ripley (*loc. cit.*) write that " it is common in the palm gardens and cultivated areas " and mention the Wadi Ghaur (*fide* Guichard and Goodwin), Muscat and Bin Ju'ai (Kinnear)[18].

The Buraimi specimen, in which the moult is not yet completed, was collected on 19th September, 1953. I can confirm the findings of de Schauensee and Ripley (*loc. cit.*) that the tail coverts are a slightly paler saffron yellow than south Arabian birds.

Pleschanka's Chat *Oenanthe leucomela leucomela* (Pallas).

An adult male was collected on 15th April, 1954 at Sharjah in sand-desert with scanty clumps of vegetation. The bird would appear to be a somewhat late migrant and its gonads were but little enlarged. Guichard and Goodwin (*loc. cit.*) collected specimens near Sharjah in March and at El Kharran in February.

Willow-Warbler *Phylloscopus trochilus acredula* Linnaeus

Three specimens of the Willow-Warbler were taken in Oman. Two were males, being obtained at Sharjah on 16th April and 24th May, 1954. The third specimen, for which I am indebted to Squadron-Leader E. A. Chapman, R.A.F., was picked up in a mummified state at Sharjah on 6th May, 1953. All three are pronouncedly white below and lack any suggestion of yellowish tinge on the upper breast. Measurements : Wing, 69 mm. (2), 70 mm. Browne (*loc. cit.*) records " leaf warblers " as common on passage, adding " the majority seemed to be *P. trochilus* (Linnaeus)." Examples were obtained on 13th April and 28th May. The subspecies is not stated.

Wood-Warbler *Phylloscopus sibilatrix* (Bechstein)

An example of the Wood-Warbler, a female, was obtained at Sharjah on 3rd May, 1954. This species does not appear to have been noted for Oman, though Browne (*loc. cit.*) records it for southern Arabia on 19th October. The present specimen was collected from an isolated tree in sand-desert.

Spotted Flycatcher *Muscicapa striata neumanni* (Poche)

This race of the Spotted Flycatcher was detected on both the spring and autumn passages, a male being obtained at Sharjah on 3rd May, 1954 and another male on 19th September, 1953 at El Ain, Buraimi Oasis.

This species is not recorded by de Schauensee and Ripley (*loc. cit.*), but is mentioned by Browne (*loc. cit.*), though the race is not specified. The two Oman birds are typical of *M. s. neumanni* in having very pale and suffused pectoral markings. Measurements : Wing 87, 91 mm.

Great Grey Shrike *Lanius excubitor aucheri* Bonaparte

A sub-adult example of this race was killed at Sharjah on 3rd May, 1954. It was observed commonly around Buraimi and along the Trucial coast. Meinertzhagen[6] states that this is " the usual resident Shrike of Arabia " and that it is replaced in the north of the Aden Protectorate and in the Yemen by the darker form *L. e. buryi*. This species was not recorded by Browne (*loc. cit.*), while Guichard and Goodwin (*loc. cit.*) collected a male at Buraimi and two females at Sharjah in December and March. This latter bird they state, shows some approach in darkness to *L. e. buryi*. de Schauensee and Ripley (*loc. cit.*) collected examples at Hajer, Batah,

Aiassam, Watsoi, Ruia and Muscat. The Sharjah bird now recorded, was collected from an isolated tree in sand-desert and its crop contained small lizards only.

Rufous Shrike *Lanius cristatus phoenicuroides* (Schalow)

Two Rufous Shrikes were collected in Oman, one an adult male on 13th April, 1954 at Mugheim about 17 miles north-west of Tarif, the second, also a male by plumage on 23rd September, 1953 at El Ain, Buraimi Oasis. It may be safely presumed that both birds were migrants, and Flight Lieutenant Harrison states that the species was not common. When the spring specimen was collected he noted " one or two shrikes seen along the littoral." The autumn specimen was a single bird and was shot in a date palm garden.

Browne (*loc. cit.*) records a female from Ruia, Masirah Island, and Guichard and Goodwin (*loc. cit.*) record it from Buraimi and Muscat in January and from Sharjah in February and March. They comment that the females from Muscat are rather intermediate between *phoenicuroides* and *isabellinus*, being paler above than the former, but having the head darker and redder than the back. It was not recorded by de Schauensee and Ripley (*loc. cit.*).

The two specimens now recorded match the less red examples of *L. c. phoenicuroides*, having greyish red-brown mantles and redder foreheads and crowns. The spring example is the more typical. Both have small white wing-bars.

It is evident from the literature that there is considerable confusion in the *phoenicuroides-isabellinus* complex, and there is wide variation in the breeding distributional maps published by different authorities. This matter is dealt with at some length by Olivier[19], wherein the extreme variability of the group is stressed. That intergradation of *L. c. phoenicuroides* and *L. c. isabellinus* is recognisable is admitted by all, while to add to the complexity of the gene-interchange in the group, *L. c. speculigerus* (if a recognisable race) enhances the genetic plasticity.

The instructive breeding distribution maps published by Olivier (*loc. cit.*, p. 86, 87) should be closely studied, showing as they do the different views held at that time, 1944, by Hartert and Steinbacher, and Buturlin and Dementiev, and these should again be compared with the map by Dementiev *et alia*[14] in the recently published *Birds of the U.S.S.R.* Meinertzhagen[6] shows clearly the breeding areas where " the majority are true to type ", very significant words, and in discussing allied forms he omits any mention of *L. c. speculigerus*, which Hartert[20], after examining the type with that of *L. c. isabellinus*, placed in the synonomy of that form. Wing measurements of the two Oman birds, 94, 89.5 mm.

House-Sparrow *Passer domesticus hufufae* (Ticehurst and Cheeseman)

One adult male and two juveniles, one male, the other unsexed, were collected, the first at Tawi Rashid on 21st April, 1954, the latter two on 29th August and 19th September, 1953 at Buraimi. This form was recorded from Masna'a, Hajer, Rina, Muscat and Batah by de Schauensee and Ripley (*loc. cit.*), and from Sharjah by Guichard and Goodwin (*loc. cit.*).

Flight-Lieut. Harrison notes " one pair only seen near Tawi Rashid Well in sand-desert (sparsely vegetated) many miles from human habitation (ca. 30 miles inland from Sharjah, on the Wadi Khor track.) The more juvenile of the two immatures was collected in " tamarisk scrub

desert in red sandstone mountain country beyond Suwara. Flocks." Measurement : Wing = 71 mm.

Yellow-throated Sparrow *Petronia flavicollis transfuga* (Hartert)

An adult male of this species, which is new to Oman, but which has been recorded for Iraq (Ticehurst *et alia*[8], Allouse (*loc. cit.*), was shot in an isolated date grove at Howelet, Wadi Khor in the western Hajr, on 21st April, 1954, where a small party was seen in rugged mountainous country.

Flight-Lieut. Harrison noted that the birds had a distinctive call, not unlike that of a sparrow, and in this connection the late Hugh Whistler[21] wrote " its monotonous chirping note recalls but is different from, the chirp of the Common House-Sparrow."

The specimen was compared with series from Pakistan, Persia and Iraq and is identical with these. Wing measurement, 77 mm.

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Clams as Predators of Birds

by Sir Philip Manson-Bahr

Received 8th November, 1955

I have read the communication of Dr. James M. Harrison on "*Fish and other Aquatic Fauna as Predators of Birds*". (Bull. B.O.C. Vol. 75, pp. 110-113, 1955) with great interest and would agree with him that this is a most

interesting subject, to which insufficient attention has so far been paid. In the Pacific, where numbers of waders congregate during the winter months, it has long been known that quite a proportion of these migrants may be seen hopping about *on one leg*. During my last visit to the Fiji Islands in March, 1950 I was able to make some observations on this point.

The main sufferer is the Wandering Tatler, *Heterosclerus incanus*. It is estimated that 10% of this species suffer from amputation of the *left* leg (invariably so). In addition to this species, a few mutilated examples of the Eastern Golden Plover, *Charadrius dominicus fulvus* Gmelin and the Eastern Bar-tailed Godwit, *Limosa lapponica baueri* have been observed.

Although no direct proof is forthcoming, yet it is generally believed that this is the work of the Giant Clam, *Tridacna gigantea*, which abounds on the coral reefs. These bivalves are provided with very powerful hinges and the shell closes with a snap by reflex action on contact with the birds' legs. Amputation takes place at the tibio-tarsal joint.

A Strange Injury to a Ringed Plover (*Charadrius hiaticula tundrae* Lowe)

by Capt. Charles R. S. Pitman

Received 22nd November, 1955

The interesting note by Dr. James M. Harrison in the Bulletin, Vol. 75, No. 8, November, 1955, on the subject of "*Fish and other Aquatic Fauna as Predators of Birds*" prompts me to record a most unusual incident in Uganda. On the evening of 6th May 1949, at Entebbe on Lake Victoria a Ringed Plover was brought to me which had been found on the foreshore crippled and absolutely helpless with a gigantic, carnivorous water bug *Hydrocyrius columbiae*, about 3 inches long and more than one inch broad, fixed firmly to the body under one wing. The bird, which could not be induced to feed, was still alive next day, but as it seemed to be seriously injured it was chloroformed and examined. It was then discovered that the bug had been feeding on its victim's liver having pierced the body with its long proboscis. Otherwise the bird was perfectly normal and healthy. The huge insect had complete control over the bird's movements and had rendered it incapable of flight. One surmises it must have literally sprung—or flown—on to the plover while it was wading in the shallows and then clung tenaciously, giving its victim no chance of getting rid of it. I was only able to remove this super-bug with considerable difficulty. *H. columbiae* is a most formidable and repulsive member of the family *Belastomidae*; it will attack small, disabled fish.

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1956

March joint with B.O.U. 17th April, 15th May, 18th September, 16th October, 20th November, 18th December.

SEPARATES

Contributors who desire free copies of the Bulletin containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. As the proofs will be corrected by the Editor, it is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Committee have decided that in future the Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

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OF THE

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BRITISH ORNITHOLOGISTS' CLUB

Edited by
DR. JEFFERY HARRISON

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BULLETIN
OF THE
BRITISH ORNITHOLOGISTS' CLUB

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The five hundred and forty-seventh meeting was held jointly with the B.O.U. at the offices of the Zoological Society of London, at Regent's Park, on Thursday, 15th March.

Chairman: Dr. W. H. Thorpe.

Members present: B.O.C. 54; B.O.U. 40; Guests 43; Total 137.

Notes on African Larks

PART II

by Mr. C. M. N. White

Received 10th October, 1955

In this second instalment of studies of African larks I deal with two further sections of the genus *Mirafra* which form well defined units, numbering them consecutively with the groups discussed in part 1.

3. *Mirafra africanoides* (Smith). This species stands alone. In its distribution it is analogous to many species of *Mirafra* since it occurs in low rainfall open savanna in south-western Africa and reappears in north-east Africa. The tail pattern is close to the larks in group two since the tail is uniformly dark except for a narrow white outer web to the outermost feather. The wing pattern exhibits well marked bright rufous outer margins on the basal half of the outer webs of the primaries, extending almost to the tips of the outer webs of the outer secondaries, and forming a distinct rufous wing patch. In habits *M. africanoides* is largely arboreal but has no flapping or clapping flight.

4. The clapper larks. The two species *M. apiata* (Vieillot) and *M. rufocinnamomea* (Salvadori) form a distinct group at once recognisable from other groups of the genus by the wing clapping habit. I discussed the general characters of the southern and central African races in Bull. B.O.C. 66. pp. 13–15, 1945. More recently Macdonald (The Ibis : 1952. pp. 629–635) has come to almost identical views for the races in South Africa. It would be tempting to unite all these larks into a single species, but there are certain objections to this course at present. In

the *apiata* group the rufous on the wing forms a broad band across both webs of the primaries, in the *rufocinnamomea* group this is not so, the rufous on the outer webs and that on the inner webs being divided by a dark zone along the shaft. No intergradation between the two types of wing pattern has yet been discovered. Secondly there may be an overlap in the ranges for *M. apiata kalaharica* (Roberts) ranges to Dautsa in Ngamiland (male in my collection collected by L. D. Vesey-Fitzgerald on 27.10.54) and therefore must come very close to the range of *M. rufocinnamomea mababiensis* (Roberts) if in fact overlap does not actually occur. Thirdly there are behavioural differences ; the *apiata* group whistles during its flights, the *rufocinnamomea* group is notoriously silent on the wing and I do not know of any authentic singing on the wing in this species. Finally the *apiata* group is especially associated with more arid and open country than the very adaptable *rufocinnamomea* races.

Mirafra africanoides (Smith).

I reviewed the southern races on the basis of material in the Transvaal Museum (Ibis : 1947. pp. 419–420. Since then much more material has come to hand from critical localities which shows that various modifications in the arrangement are needed.

M.a. africanoides (Smith).

Roberts proposed to restrict the type locality to Litakun, near Kuruman but Mr. J. D. Macdonald has kindly informed me that Smith's types do not agree with birds from Griqualand West but are darker and agree with specimens from Colesburg, which he would regard as the type locality of the nominate race. He suggests using *harei* Rbts. as the name of the lighter birds from Griqualand West but had no topotypical *harei* from Windhoek. I have a series from Binsenheim, south of Windhoek which are much lighter and less streaked than birds from Griqualand West, and the latter cannot possibly be called *harei*. The darker colour of birds from Colesburg suggests comparison with *M. a. austinrobertsi* White from the Transvaal but no specimens are available in the British Museum of this race.

The racial divisions in this area need study with much more material ; dark and light birds seem to have a rather spotty distribution. 100 miles north west of Colesburg at Hopetown, Mrs. Hall (*in litt.*) informs me that birds are pale like others from Kuruman. Two from Kimberley lent by Mr. R. H. Smithers from the National Museum, Bulawayo are darker than others seen from Griqualand West, and 100 miles north-east of Kimberley at Bloemhof, the Transvaal Museum has dark specimens referable to *austinrobertsi*. I have also seen a lighter bird from Mahalapye, Bechuanaland in the National Museum, Bulawayo which agrees quite well with the pale Griqualand west population. On the material which I have seen, the darker birds seem to have a more eastern range from Colesburg, Kimberley, Bloemhof, Pretoria, Nylstroom and Waterberg in the Transvaal ; west of them occur paler birds at Prieska, Fourteen streams, Barkly West, Kuruman, Hopetown, Mahalapye. But I am not satisfied that clear cut ranges for two or more races can yet be properly defined. Nor is the extension north west into South West Africa of the paler of these populations clear for few specimens seem to be available from that area. Single specimens from Aus and White Rand, near Gibeon are much too pale and lightly streaked above to be assigned there.

M. a. vincenti (Roberts).

In 1947 only the very worn original series of the Southern Rhodesia race at Pretoria had been available. More material in good plumage has now been examined through the kindness of Mr. Smithers ; these show that this race is not unlike the birds discussed above under the nominate form. It differs in being duller, less reddish above with heavy black feather centres, especially in the streaking on the head top ; the breast spotting better developed.

M. a. mossambiquensis (Pinto).

Described (1952 : Bol. Soc. Est. Mocamb. 2. p. 5) since my revision ; the type locality is Maquese, southern Portuguese East Africa. Dr. Rosa Pinto has kindly enabled me to see two examples. This race is much paler above than either of the foregoing, though apparently locally variable, palest at Maquese and Maue-ele, more reddish to the south and west at Bela Vista, Marracuene and Massingir. (Cf. Lamm. Ostrich : 1953. 24. p. 4). No contiguous populations in the Union of South Africa seem to be known and there is no doubt that the two specimens examined are much paler than *vincenti*, *austinrobertsi* or *africanoides*, varying from a pale reddish to greyish fawn above.

M. a. harei (Roberts).

This name has been constantly misapplied in the past ; Roberts always used it for the darkest of the populations of South-west Africa, and I followed him in 1947, although I noted that the type was a pale bird. I have now examined the following new material : 1 White Rand, near Gibeon ; 6 Bissenheim, S. of Windhoek ; 2 plain of Teufelsbach, N. of Windhoek (topotypes of *isseli* Hoesch and Niethammer) ; 4 Osona, Okahandja ; 1 Karibib ; 1 Erongo. All these birds agree well ; they differ from the darkest population to the east and north-east in being much lighter and more yellowish above with less streaking. Roberts, owing to his misapplication of *garei*, named them *M. a. omaruru*, and this name in my view is clearly a synonym of *harei*. This race ranges from Franzfontein to Otjimbinque and Aus, Omaruru, Okahandja, Windhoek and Gibeon ; a single specimen from Eckenberg, 35 miles north-east of Okahandja shows some traces of intergradation with *gobabisensis* (Roberts) in its richer head top and face. I cannot find any grounds to support the recognition of *isseli*.

M. a. gobabisensis (Roberts).

Thss race ranges to the east and north-east of *harei* from Alice and Gobabis to Osire and the Waterberg and provisionnally to Outjo. The fresh material now available consists of 4 from Alice (s.w. of Gobabis), 6 from Osire and 1 from Gobabis, the latter lent by the National Msueum, Bulawayo. Compared with *harei* these are all richer and redder in colour, especially on the crown, face and wing margins ; the streaking on the upperside is likewise more pronounced. This race is not entirely uniform ; on the material now to hand the five birds from Alice and Gobabis are rather lighter than the six from Osire suggesting a cline to *M. a. rubidior*. But Mrs. Hall writes that birds from Waterberg and from Gobabis in the British Museum are all richly coloured. These are the dark birds to which the name *harei* was formerly incorrectly applied.

M. a. rubidior (White).

Described in Bull. B.O.C. 1955. (75), p. 29 from Ozondache. There

are now four examples of this red race from the type locality and Okaputa. The red of the upperside is a dark foxy red, much darker and richer than in the last mentioned form. So far only known from a comparatively small area north of the Waterberg and Otjiwarongo. More collecting will be needed to work out its full distribution.

M. a. sarwensis (Roberts).

Lighter than any of the other populations of South West Africa, being a light pinky rufous above, much lighter than *gobabisensis* and less yellowish red than *harei*. Birds of this type occur from east of Etoscha pan to the western Kalahari as far as Ghanzi, but not in Ngamiland. *Tsumebensis* (Roberts) founded on a single worn bird is a synonym. My conclusions on this race and its range in South West Africa agree with those of Mr. Macdonald.

M. a. makarikarii (Roberts).

In 1947 I had only seen a single example ; through the kindness of the National Museum, Bulawayo I have now seen a series from Ngamiland and Makarikari pan. They are an inconstant series, all separable from *sarwensis* by a further loss of red pigment, and on the whole, rather yellowish sandy-grey above. This is noticeable on the head top, wing margins and face especially. Two out of four from Makarikari and Nata are very pale and greyish with light streaking, but the other two are not separable from some Ngamiland birds.

There is probably some intergradation with *sarwensis* from Ngamiland south west which accounts for the slightly less grey range of variation in Ngamiland birds but none of them is as vinous red as *sarwensis*, and a very freshly moulted bird from Tsotsoroga contrasts well with equally fresh *sarwensis*. I believe that it is best to include all these birds under *makarikarii* whilst recognising that Ngamiland birds show traces of intergradation with *sarwensis*.

M. a. trapnelli (White).

Colder and more greyish-brown than the last race ; birds from Balovale are markedly brownish above compared with any of the birds included under *makarikarii*. A series of five lent by the National Museum, Bulawayo from south west Barotseland is lighter above. They lack the rusty yellow tinge of many Ngamiland birds but are very near to the palest and greyest extreme of *makarikarii* from Makarikari pan. It would have been easier to define the races if the north Bechuanaland bird had been named from Ngamiland, enabling one to recognise a slight trend to pallor at Makarikari pan. As Balovale birds are a colder and darker brownish shade above, I have no doubt of the validity of *trapnelli*, and I think it advisable to include birds from south west Barotseland with them, recognising a trend to pallor in that area.

The pattern of colour variation.

The pattern of colour variation is remarkably constant in Southern Africa. Reddish races occur from the Cape Province to Southern Rhodesia and South West Africa, differing in shade of redness, brownness or yellowness, and in intensity of streaking on the upper surface. Between them from Bechuanaland to western Northern Rhodesia are interposed grey backed populations. Narrow zones of intergradation may exist west of Ngamiland. The population of southern Mozambique is isolated, and apparently inconstant, some birds being very like the grey

backed Bechuanaland birds and others more reddish above. It may well be that the red or grey colour of the back is very simply controlled, and that the process of selection in southern Mozambique is incomplete and the population there still quite unstable.

The East African populations seem likewise to have not yet reached a full degree of stability. I discussed them in Bull. B.O.C. 1953, pp. 87–88. Further data since then confirms the fact that the birds of most of Kenya colony are strongly reddish above, while those from British Somaliland and from southernmost Kenya and northern Tanganyika are colder and more brownish or sandy above. Mr. J. G. Williams of the Coryndon Museum, Nairobi kindly drew my attention to the very richly coloured birds found about Makindu and Simba in eastern Kenya, associated with red soils. But a series from the Matthews range recently collected includes some very similar birds, as well as others paler and pinker. Dr. A. L. Rand has informed me that three from Bali and Arusi in Ethiopia in the Chicago Natural History Museum are very similar to Simba birds. Mr. Williams has also raised the question as to whether *M. a. intercedens* and *M. a. alopex* are really conspecific since he collected both within twenty miles of each other in British Somaliland, *intercedens* in dry bush areas and *alopex* on open grassy plains on red soil. This may well reinforce the evidence that many populations of larks change abruptly with little or no intergradation. But it is difficult to see any other grounds to support the division into two species and the gap is bridged by *M. a. macdonaldi* White from Yavello in south Ethiopia. I believe that we should continue to maintain all as conspecific, and that it would be unsafe at present to sub-divide the birds assigned to *M. a. intercedens.*

Mirafra rufocinnamomea (Salvadori).

I reviewed variation in this species in Bull. B.O.C. 1953, 73, pp. 88–91. I then grouped a number of variable populations under *M. r. fischeri* (Rchw.) owing to lack of adequate material in comparable fresh plumage. In the populations included under that name soil staining is rare or non-existent but abrasion in breeding birds produces a dull faded appearance and soot-staining from burnt vegetation is not uncommon. I have since been able to examine more material in fresh plummage and consider that some improvement to the 1953 arrangement is desirable. I still retain under *M. r. fischeri* the birds from the coastal areas of East Africa from Mombasa to the Zambesi mouth and would include with them birds from Nyasaland, Northern Rhodesia (except extreme west) and the Katanga. These populations are all dark both above and below, the upperside being greyish or brownish with well developed blacker feather centres. Intensity of pigment reaches its maximum south of the Zambesi in southern Portuguese East Africa and adjacent Swaziland and north east Transvaal. In addition in these areas the upperside is characterised by a deep vinous pink shade in the majority of specimens which is lacking in any of twenty-three birds from the area now assigned to *fischeri.* Dr. J. P. Chapin recently drew my attention to this feature when visiting Lusaka and I believe that this population should be recognised by name.

Mirafra rufocinnamomea pintoi subsp. nov.

Description : differs from *M. r. fischeri* (Rchw.) by its usually well

marked dark vinous pink tinge on the upperside ; underside usually very strongly pigmented.

Type : adult female collected at Catuane, southern Portuguese East Africa by Dr. A. Rosa Pinto on 3rd January, 1954. In my collection.

Distribution : Southern Portuguese East Africa to Swaziland and north-east Transvaal.

In the more western part of their range the populations of this lark formerly grouped under *fischeri* become paler than in East Africa ; the black pigment in the upperside is greatly reduced, the abdomen is much paler, the breast usually so and the breast spotting less heavy. Two of these pale populations inhabit the area from the Kasai to French Equatorial Africa and Southern Rhodesia respectively. The former of these represents the north western periphery of *fischeri*-like populations and there seems no reason to justify retaining it as identical with the much darker East African birds. I therefore propose to describe it as :—

Mirafra rufocinnamomea schoutedeni subsp. nov.

Description : upperside much lighter than *M. r. fischeri* due to reduction in black pigment, and consistently light warm brown or dark clay brown ; underside also lighter and with the breast spotting much reduced compared with *fischeri.*

Type : adult male collected at Luluabourg, Kasai, Belgian Congo on 26th May, 1939 by Fr. Callewaert. In my collection.

Distribution : Lower Congo to the Kasai, Gaboon and French Equatorial Africa.

The light birds from Southern Rhodesia are remarkably similar to the above described race although separated from them by quite different populations. In series on the upperside they show a tendency to vinous pink which is absent from *schoutedeni* and is evidently typical of all birds from south of the Zambesi. However, they are much too pale to unite with *pintoi.* If they had a range contiguous with *schoutedeni* I should not feel disposed to name them. As it is one must either recognise two slightly different pale populations widely separated geographically under a single name, or separate the Southern Rhodesian birds. On balance I think the latter course is preferable as the slight difference in colour above is quite perceptible in series of good fresh specimens.

Mirafra rufocinnamomea smithersi subsp. nov.

Description : A pale form of *M. rufocinnamomea* very similar to *M. r. schoutedeni* but with the upperside brighter and more vinous pink ; much lighter above and below than the vinous pink *M. r. pintoi.*

Type : Adult male from Deka Farm, Matetsi, Southern Rhodesia collected on July 10th, 1954. In the National Museum, Bulawayo. Reg. No. N.M. 16374.

Distribution : Southern Rhodesia and the northern Transvaal ; probably fusing with adjacent races but no material from any locality where this occurs.

It seems desirable to redefine more accurately the characters of *M. r. mababiensis* (Roberts) as in 1953 I had only seen the example in the Transvaal Museum. Since then I have seen a number of examples ; viz. : 2 from Ngamiland and 2 from south-west Barotseland, all in the National Museum, Bulawayo, and one in my own collection collected by Mr. W. Hoesch at Mupapama, Okovango, South West Africa. Apart

from its very pale colour, this race is much more silvery grey above than other populations. The light edges to the wing feathers are creamy white and the rufous on them much paler than in other races. This further study of the *fischeri*-like populations of *M. rufocinnamomea* has served to confirm that the various races and populations included under this name are much more constant than has been supposed. I can see little evidence of the regular co-existence of colour phases except perhaps in the lowlands of East Africa. Elsewhere sporadic variants may occur but populations are remarkably constant when reasonable samples are available. Variation in the races may be summarised for convenience.

(a) Dark populations strongly pigmented : *fischeri* (mainly grey-brown or dark cold brown) and *pintoi* (dark but with vinous red suffusion above).

(b) Light populations with reduction of pigmentation : *schoutedeni* (light brown) ; *mababiensis* (greyish) *smithersi* (light vinous rusty).

Trends of variation which should be stressed are likewise the presence of pinky vinous in the southern populations as well as the change from dark eastern to light western populations. There is unfortunately very little evidence from areas where intergradation between prevailing colour types might be expected. South of Lusaka in Northern Rhodesia the populations are variable and unstable and sometimes more like *fischeri*, sometimes more like *smithersi*. *M. r. Iwenarum* White also appears in some ways the product of intergradation between *fischeri* and *mababiensis*, and further collecting in eastern Angola is needed to throw light on this. At present it is retained as a light population, lighter and pinker above, and lighter below than *fischeri* and less grey and more richly coloured than *mababiensis*.

To sum up then, I believe that the various populations of clapper lark discussed above should not be lumped under a single name as this masks certain well marked trends of variation which are easily seen in series of fresh plumaged birds. I am much indebted to Mr. R. H. Smithers for the loan of material from Southern Rhodesia, Dr. A. Rosa Pinto for material from Southern Portuguese East Africa and Mr. C. W. Benson for collecting a good series in the northern province of Northern Rhodesia.

Ecology of M. rufocinnamomea.

M. rufocinnamomea is evidently more adaptable than any other species of the genus in its ability to establish itself in what are not typical lark habitats. In much of its Central African range it occurs in lightly timbered savanna, cultivation and clearings in what is for the most part well timbered country. In south east Nigeria it has colonised man-made clearings in country with much forest, and it is not impossible that there will be found a link between the *buckleyi* populations of south east Nigeria and the *schoutedeni* populations which range north 280 miles beyond Brazzaville to Oka. The nature of the habitats of *rufocinnamomea* would not induce one to expect a close correlation between colour of the bird and ground colour since much of the terrain frequented by *rufocinnamomea* has a permanent grassy and scrubby cover. Over much of Central Africa this seems to be born out by the presence of dark coloured *fischeri* on soils of various colours. The light colour of *lwenarum* may indicate a tendency to correlation with soil since it not only lives on whitish grey sands but the latter are largely covered with fine wiry

Loudetia grass which forms a poor soil cover. The reduction in black patterning of the *fischeri* complex of races from east to west has been pointed out above, and it is worth noting also that *buckleyi* is still less strongly patterned than *schoutedeni* on the upperside and the breast. It remains to be discovered whether any of the other races of the species with blackish or very red uppersides do correspond to prevailing soil colours, and if so, whether in such cases the soils are less well covered than in other areas.

Abnormal Seasonal Assumption of Spring Plumage in the Redshank (*Tringa totanus* Linnaeus) in association with possible Radioactive Contamination

by Dr. James M. Harrison and Dr. Jeffery G. Harrison

Exhibited at the February meeting of the B.O.C.

In earlier notes [1-3], we have recorded and exhibited an Icelandic Redshank, *Tringa totanus robusta* Schiöler, taken in Kent in November, showing the assumption of advanced summer plumage. Following a note in *The Times* by Mr. J. G. Williams [2], in which it was suggested that this abnormal assumption of breeding plumage might be connected with contamination by radioative substances, we decided if possible to secure further specimens for investigation. Unfortunately we did not realise when the November bird was collected that this matter of radioactive contamination could be involved.

However, on 24th December, 1955 a female Redshank was shot by Richard Jones, in south-east Sussex and was examined by us on the spot. This specimen showed incipient assumption of summer plumage. On dissection the ovary and oviduct appeared somewhat more fully developed than is usual in individuals of this species collected at this time of the year.

Acting upon this slight but important evidence, we submitted the roughly dried part skeleton, consisting of the thorax, pectoral girdle, pelvis and femora to Dr. John Loutit of the Radiobiological Research Unit, the Atomic Energy Establishment, Harwell, for opinion as to radioactive contamination. The dried bones were dissolved in nitric acid and the presence of radioactive contamination was confirmed with a Veall Geiger Counter. A graph was prepared assessing the degree, and was exhibited.

Dr. Loutit's report upon the investigation, which was carried out by Dr. G. E. Harrison and Mr. W. Raymond was that "at least it proves that the bird has been exposed to some radiation". He adds "I think the data are hard facts. However, I personally would be wary of drawing conclusions from them. As I said in my (earlier) letter, the radioactivity found was extremely small; it could be that Continental or domestic birds in their winter plumage have the same degree of contamination as the

[1] Harrison, James M. and Jeffery G. "*Icelandic Redshank in freshly moulted summer plumage in November*". Bull. B.O.C. Vol. 76, pp. 23–25.
[2] The Times. "*Birds from Siberia in summer plumage*". 10–12–1955.
[3] The Times. "*Birds in Summer plumage*". 14–12–1955.

bird actually investigated; in a series of one there is no control . . . It does not rule out that the bird might have been exposed to vastly higher doses of external radiation (for example flying through contaminated air). This sounds like a stimulatory action of radiation. While I do not rule out that such reactions do occur, it is more or less a radiobiological axiom that radiation depresses cellular activity. It is true of course that there is a rebound phenomenon of stimulation, as after most depressions, so that there is an appearance of direct stimulation, unless the whole course of events has been followed''. It is desirable to comment upon this 'rebound phenomenon' which would postulate that the irradiation would delay the assumption of summer dress at the proper season and that it would then materialise as a *late phenomenon out of its proper season.*

It would seem desirable to see what histological evidence there may be in connection with this abnormal assumption of summer plumage, during the period of reproductive quiescence. In other words, whether the histological evidence of follicular activity in the female or spermatogenesis in the male can be definitely associated with radioactive contamination. This problem would seem to be one in which direct experiment might prove conclusive.

The ovary and oviduct of this specimen were submitted to Dr. A. J. Marshall for investigation. His report runs ''the slides have finally emerged and they show quite clearly that the bird has become sexually advanced. You will see that the oocyte diameter (in the largest cases) is somewhat in excess of what would be expected from an ordinary wintering bird. This probably connotes oestrogen liberation. The oviducal proliferation is of course, a consequence of oestrogen liberation. You will realise however, that without a series of control specimens, this information should be used in a very guarded fashion''.

The findings on the Redshank are however, factual, though still, as stressed by the above authorities, in a very speculative category. Elucidation must now await the results of the investigation of further material and of controlled experiments.

Perhaps some general comments should be made. Firstly, it has been stated that harmful mutations may be expected to arise not earlier than in the fourth generation following exposure of humans, and competent authority has stated that as the result of the test explosions the increase in the number of mutations will be less than one hundredth of 1%. Moreover, far more radiation is received by patients as part of medical treatment than from nuclear explosions and a significant fraction reaches the reproductive organs [4]. One thus brings perspective to bear upon this subject, which might otherwise capture human imagination most unfavourably.

We would gratefully acknowledge our indebtedness to Dr. John Loutit and his colleagues for the investigations carried out at Harwell, and to Dr. A. J. Marshall for the sections and his report on the histology of the ovary and oviduct; to Dr. Hugh R. C. Hay, Consulting Radiologist for helpful criticism and to Richard Jones for providing the specimen here discussed.

[4] Modern Medicine, 1956, II, pp. 95–96. Symposium, H. J. Muller, *Genetic Injury by Radiation*, Science, 1955, 121, pp. 837–840.

The names *Treron griseicauda* and *Treron pulverulenta*

by Dr. Ernst Mayr

Received 17th November, 1955

Sims and Warren, in their recent note on pigeons of the *Treron pompadora* group (1955, Bull. Brit. Orn. Club, 75: 96–97) have overlooked the fact that the International Zoological Congress at Copenhagen has reaffirmed the important principle that an otherwise unavailable name does not acquire availability by being cited subjectively in the synonymy of another name (*Copenhagen Decisions*, 115). The fact that Bonaparte in 1854 cited the manuscript name *Treron griseicauda* Gray in the synonymy of *Columba aromatica* Gmelin does not give it any validity. It is therefore unnecessary to transfer the name *griseicauda* from the Celebes form, for which it has been used universally in the last 30 years (and also from 1863–1893) to the Java form universally known as *pulverulenta*. Wallace (1863) was the first to describe these birds in a manner making the names *griseicauda* and *pulverulenta* nomenclaturally available and the types and type-localities fixed by him will have to stand. There is no legitimate reason to deviate from current usage.

For notes on the classification of these pigeons see Bull. Amer. Mus. Nat. Hist., vol. 83 (1944), p. 146–147.

Cossypha insulana Grote conspecific with *Cossypha bocagei* Finsch & Hartlaub

by Mr. R. E. Moreau and Mr. C. W. Benson

Received 15th December, 1955

The fact that Dr. A. Prigogine asked for an opinion on Cossyphas collected on Mt. Kabobo (5°06′S., 29°01′E., west side of Lake Tanganyika) led us to examine the birds attributed to the above species. Chapin ("*Birds Belgian Congo*", *Bull. Amer. Mus. Nat. Hist.* 75A, p.518) has remarked that *C. bocagei* and *C. insulana* "cannot possibly be races of one species" and he attaches *C. kungwensis* Moreau, described from the mountains on the east side of Lake Tanganyika, to *C. insulana*. Chapin's reasons for this were that *C. bocagei* (as hitherto understood) has a much longer tail in relation to its wings than *C. insulana*.

We find that in four specimens of *C. bocagei* from western Angola measured by us the tail/wing ratio averages 81.9 and in 22 from Northern Rhodesia and the Upper Katanga* 76.7. By contrast, in four *C. i. insulana* (from Fernando Po) it averages 70.3 and on the dimensions given by Serle for his *C. i. granti*, on the neighbouring Kupe Mt., the tail/wing ratio in that form averages 70.1. However, the gap between the foregoing extreme ratios is filled by the Kungwe birds, nine of which we find to average tail/wing ratio 73.0 and those of Kabobo, which average 74.5; while on the dimensions given by Prigogine (*Rev. Zool. Bot. Afr.* 46 (1952),

*Recently distinguished by Benson (on reduction in rufous tinge) as *C.b. chapini*—*Bull. Brit. Orn. Cl.* 75, p. 104.

p.109) for his *schoutedeni* from Lutunguru, only about 150 miles north of Kabobo, the tail/wing ratio in that form is 68. In fact then, the two populations furthest to the northwest have the shortest tails, and the two most southerly populations the longest, but the intermediate ratios in central Africa do not fall on a geographical cline.

In plumage there is no clear distinction between the birds that have been regarded as belonging to the two different species. The various populations differ only in shade, except for the pattern round the eye. Fernando Po and Kabobo birds—the most remote geographically—both have a line of black feathers under the eye. Northern Rhodesian birds have no black under the eye at all, the red-brown of the cheeks running right on to the lower eye-lid; while both the Kungwe and the Kupe birds have at most a line of dark feathers on the eye-lid itself. Again, the various stages in the facial pattern do not lie on a geographical cline.

Thus on both characters, plumage and dimensions, *C. insulana* must be regarded as conspecific with *C. bocagei* (the older name). Dr. Chapin has expressed his agreement with this conclusion.

Variation in the Flycatcher Shrike *Hemipus picatus* (Sykes)

by Mrs. B. P. Hall

Received 23rd December, 1955

A study of all the skins of the Flycatcher-Shrike, *Hemipus picatus*, in the British Museum shows more geographical variation than is indicated by the recognition of only the three well-defined races, *H.p.picatus*, *H.p.capitalis* (McClelland) and *H.p.leggei* Whistler. In *H.p.capitalis* of north eastern India, Assam, northern Burma and Siam, Yunnan and Tonkin the male has a black head but both the male and female have brown backs: in *H.p.leggei* of Ceylon both sexes have black backs. Throughout the rest of the range of the species, in the rest of India, Burma, Siam and Indo-China, and in Malaya, Sumatra and Borneo, the males have black backs and heads, and the females brown; all birds from these countries are generally recognised as belonging to the nominate race *H.p.picatus*, which was described from the Deccan.

However examination of about two hundred and fifty specimens from within this range shows that, at the south eastern extreme, in Sumatra and Borneo, and to a slightly lesser degree in the Malay Peninsula, the brownish-grey wash on the breasts of the females is deeper in tone, contrasting more strongly with the white of the abdomen, the brown of the back is darker and the head more suffused with black. Variation in the males is not so marked but those from the south-east have slightly darker breasts than others.

These characters in the females seem to me to be well enough marked to warrant racial recognition. There is an old name available, *Hemipus intermedius* Salvadori, (Ann.Mus.Civ.Gen. 14, 1879, p.209: Sumatra) which has long been placed in the synonymy of *H.p.picatus*: I now propose that it should be brought into use for the race of Sumatra, Borneo and the Malay Peninsula. *H.p.intermedius* intergrades with *H.p.picatus* about

the Isthmus of Kra, but I find that the majority of females from extreme southern Tenasserim and Peninsular Siam are closer to *intermedius* than to *picatus*, while all from further north are typical *picatus*. It is perhaps convenient therefore to consider Chumphon, at latitude 10°30′N. as the northern limit of the race since this is the most northern latitude at which variation from the typical *picatus* is found.

It is interesting to find that on the eastern side of the Gulf of Siam at the same latitude in Cochin China, the same variation is found in some birds. Mr. H. G. Deignan has told me that a female from Bienhoa, Cochin China in Washington matches others from Peninsular Siam: this is also true of a female from Tay-Ninh in the British Museum, though a very old, worn female from Saigon and two males from An-binh are typically *picatus*.

I am grateful to Mr. Deignan for information on the specimens in Washington and to Sir Norman Kinnear who looked at the skins in London with me.

Notes on an aberrant Carrion-Crow *Corvus corone corone* Linnaeus obtained in Hertfordshire

by Mr. Bryan L. Sage

Received 4th November, 1955

On the 13th July, 1955, near Northaw, Herts, I shot a juvenile female Carrion Crow, *Corvus c. corone* which exhibits several very interesting characters. Firstly it has particulary well marked growth bars on the wing and tail feathers. These are of course quite a well known phenomenon and need not be discussed further. The most interesting thing about this specimen is the existence on the 3rd–10th primaries and all the secondaries of each wing, of whitish patches. I propose to term this condition Incipient Symmetrical Albinism, which we can assume is caused by inhibited pigmentation. I described a case of symmetrical albinism in the wings of this species some time ago (*antea* 74 : 104). To be precise these whitish areas are approximately in the centre of the inner webs of the affected feathers, being smallest on the 3rd primary and most extensive on the 7th–10th primaries. The table shows the approximate length and maximum width of these patches in millimetres:—

Primary	Length	Maximum width
3rd	4.5	3
4th	25	5
5th	37	10
6th	15	6
7th	36	11
8th	73	15
9th	76	16
10th	39	15

It must not be supposed that these patches are regular oblongs in shape, they are widest in the centre and taper towards the ends. Those on the secondaries are slightly more regularly oblong in shape. It is interesting to speculate why these white areas are *not* largest in area on the longest primaries (i.e. 3rd–6th), as one would expect if they were correlated with

the rate of growth of the feather ; and why they are not present at all on the 1st and 2nd primaries. The remainder of the plumage of this bird is normal as regards colouration.

The last, but by no means the least interesting condition exhibited by this bird, is an unusual abrasion (for want of a better term) of the tips of the wing and tail feathers. This is, as I have ascertained with Dr. Jeffery Harrison, evidently a condition analogous with that exhibited by the Guillemot, *Uria aalge* (Pontoppidan) which he recently described (*antea* 75 : 113–114). In the Crow this is most noticeable on the secondaries, on some of these feathers the shafts, virtually without any barbs, extend in some cases as much as 6 millimetres beyond the contour of the feathers. The condition is not of course by any means so far advanced as in the Guillemot, whose plumage is called upon to withstand far greater strain than that of a Crow. If we assume that Dr. Harrison's theory of an inherent weakness of the barbules is correct, as I believe it is, then it seems probable that it is a condition more widespread than these two recorded instances suggest. The degree of aggravation of this inherited (?) condition would depend on the circumstances of the individual bird's environment. Dr. Harrison has advanced very good reasons why it should be particularly aggravated in the Guillemot. The fact that it is fairly noticeable in this Crow may be due to the fact that it was shot in a wood, and I know from personal experience that the Crows inhabiting this wood rarely wander far from it. They nest mainly within its boundaries, feeding in the rides and glades (where my specimen was shot). The constant rubbing of twigs and undergrowth would account for the marked wear exhibited.

Wood-Pigeon *Columba palumbus palumbus* Linnaeus with odd-coloured eyes

by Mr. Byan L. Sage

Received 22nd November, 1955

On 12th November, 1955, at Hatfield, Hertfordshire, I caught a Wood-Pigeon that had one wing slightly damaged by gunshot, and a small wound on the rump. These injuries had apparently been inflicted some two or three days previously. The bird was quite plump and healthy.

The iris of one eye was the normal pale silvery tinted straw colour, but that of the other eye was a deep orange-yellow, quite clear in appearance. The colouration of the plumage and other soft parts was quite normal. There did not appear to be any pathological condition of the aberrant eye to account for the unusual colour. Mr. Derek Goodwin informs me that, with the exception of pathological conditions, he has never seen a bird with odd-coloured eyes or a Wood-Pigeon with orange eyes.

This condition is perhaps analogous with that which occurs not uncommonly in *homo sapiens*, where it normally takes the form of a variation in tint of the same basic colour. It is expressed in the pigmentation of the retina and does not appear to be hereditary or to impede the sight in any way.

BRITISH ORNIT

INCOME AND EXPENDITURE ACCOUN

1954 £	EXPENDITURE	£ s. d.	£ s. d.
	"Bulletin" Vol. 75:		
	Cost of publication, distribution, including Editor's		
222	Expenses	280 15 9	
64	*Less* Sales	64 2 6	
158			216 13 3
24	Notices for Meetings etc.		30 16 2
	Postages, Projectionist, and Miscellaneous expendi-		
32	ture		29 6 0
	Audit Fee		5 5 0
5	Contribution "Zoological Record"		5 5 0
219			287 5 5
	Balance, Excess of Income over Expenditure,		
85	carried down		17 0 3
£304			£304 5 8
146	Surplus for the year carried to Accumulated Fund		86 14 7
£146			£86 14 7

BALANCE SHEET

£		£ s. d.	£ s. d.
	ACCUMULATED FUND:		
	As at 31st December, 1954		1237 14 9
	Add: Surplus Income for year		86 14 7
			1324 9 4
	Less: Cost of Projector written off	48 16 0	
	Reserve against Investments	20 0 0	
			68 16 0
1238			1255 13 4
	BULLETIN FUND:		
73	As at 31st December, 1954		72 18 3
44	SUBSCRIPTIONS 1956 paid in advance		58 13 6
17	SUNDRY CREDITORS		5 5 0
£1372			£1392 10 1

We have examined the above Balance Sheet and Income and Expend
accordance therewith, and in our opinion correct.

FINSBURY CIRCUS HOUSE,
BLOMFIELD STREET, LONDON, E.C.2.
24th February, 1956

OGISTS' CLUB

E YEAR ENDED 31st DECEMBER, 1955

1954 £	Income	£ s. d.	£ s. d.
	Subscriptions:		
194	186 Members	195 6 0	
15	12 Associates	12 12 0	
53	Income Tax recovered under Deed of Covenant ..	54 1 6	
262			261 19 6
	Entrance Fees:		
6	3 Members	3 0 0	
1	– Associates	– – –	
			3 0 0
35	Investment Income		39 6 2
£304			£304 5 8
85	Excess of Income over Expenditure, brought down		17 0 3
61	Sales of *Bulletin* for previous years, *less* Expenses		69 14 4
£146			£86 14 7

31st DECEMBER, 1955

£		£ s. d.	£ s. d.
	Investments at Cost:		
	£930 3½% Defence Bonds	930 0 0	
	£100 3% Savings Bonds 1960/70	100 0 0	
		1030 0 0	
	Less: Reserve	20 0 0	
1030			1010 0 0
	(Market Value of all Securities at date £1012)		
	Projector, Lantern and Screen:		
	As at 31st December, 1954	1 0 0	
	Add: Cost of new Aldis Projector for slides ..	48 16 0	
		49 16 0	
	Less: Amount written off	48 16 0	
1			1 0 0
1	Stock of "Bulletin" Nominal Value		1 0 0
2	Debtors: Sale of old *Bulletin* etc.		62 13 0
338	Cash at Bank		317 17 1
£1372			£1392 10 1

E. M. NICHOLSON, *Vice-Chairman.*
C. N. WALTER, *Hon. Treasurer.*

with the books and records of the Club and certify them to be in

W. B. KEEN & CO.,
Chartered Accountants.

BRITISH ORNITHOLOGISTS' CLUB

REPORT OF THE COMMITTEE

FINANCE

The Committee presents herewith the Accounts of the Club for the year 1955, which show an excess of income for the year of £17 0*s*. 3*d*. as compared with £85 6*s*. 7*d*. in the preceding year.

The decrease of £68 is mainly accounted for by the increased cost of the *Bulletin*. Eighteen more pages were printed than in the previous year, while in addition the Club is bearing the cost of blocks and has increased the number of free copies for contributors up to 50.

Once again, thanks to the efforts of Mr. R. A. H. Coombes, the Club has benefited by a windfall of £60 in one order for the sale of old *Bulletins*.

A new Aldis 1,000w. projector for the showing of slides was purchased during the year at a cost of £48 16*s*. 0*d*., and, following previous practice, this has been written off.

Provision has been made in the Accounts for the depreciation in the market value of an investment.

GENERAL

The Club held nine meetings during the year. By a resolution passed at the Annual General Meeting, the June meeting was replaced by one in September. As usual, the March meeting was held jointly with the British Ornithologists' Union. The total attendances were 423, one less than in 1954.

MEMBERSHIP

The Committee very much regret to record the death during 1955 of of Mr. A. Ezra. Three new members were elected, and five members resigned, reducing the membership from 199 to 196. Since the end of the year nine new members have joined the Club, and there have been three resignations.

THE BULLETIN

The Editor and printers are to be congratulated on the promptness with which the *Bulletin* has been published during the past twelve months.

The Rules were revised in accordance with resolutions passed at the last Annual General Meeting, and were reprinted during the year.

ACKNOWLEDGMENTS

We are most grateful to Mr. Gaffney for his handling of the projector and lantern, often in difficult circumstances, and to Messrs. W. B. Keen and Company for acting as Auditors.

E. M. NICHOLSON
Vice-Chairman.

24th February, 1956.

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1956

17th April, 15th May, 18th September, 16th October, 20th November, 18th December.

SEPARATES

Contributors who desire free copies of the Bulletin containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. As the proofs will be corrected by the Editor, it is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Committee have decided that in future the Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions up to 1,500 words on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

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BULLETIN

OF THE

- 2 MAY 1956
PURCHASED

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Edited by
DR. JEFFERY HARRISON

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1956

BULLETIN
OF THE
BRITISH ORNITHOLOGISTS' CLUB

Volume 76
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Published: 1st May, 1956

ANNUAL GENERAL MEETING

Chairman: Colonel R. Meinertzhagen

The Sixty-fourth Annual General Meeting of the Club was held at 5.45 p.m. on Tuesday, 17th April, 1956, at the Rembrandt Hotel, Thurloe Place, London, S.W.7.

The Minutes of the last Annual General Meeting held on 19th April, 1955, were passed. The Report and Accounts for the year to 31st December 1955, were passed unanimously. Mr. C. N. Walter explained that with the proposed improvement in the Bulletin for the year 1956, the Accounts will show a deficit at the end of the year, owing to the high cost of printing. It is proposed to use the Bulletin Fund, to which many members voluntarily subscribe, to cover this deficit.

The Chairman moved a vote of thanks to the Hon. Secretary, Hon. Treasurer, the Editor and the Auditors for their work during the year.

Election of Officers

Chairman: Mr. C. W. Mackworth-Praed.
Vice-Chairman: Captain C. R. S. Pitman.
Hon. Treasurer: Mr. C. N. Walter (re-elected).
Hon. Secretary: Mr. N. J. P. Wadley (re-elected).
Committee: Miss T. Clay.

Committee, 1956

Mr. C. W. Mackworth-Praed, Chairman (1956), Captain C. R. S. Pitman, Vice-Chairman (1956), Mr. C. N. Walter, Honorary Treasurer (1950), Mr. N. J. P. Wadley, Honorary Secretary (1950), Dr. J. G. Harrison, Editor (1952), Major-General C. B. Wainwright (1953), Dr. G. Beven (1954), Mrs. B. P. Hall (1955), Miss T. Clay (1956).

The Annual General Meeting was followed by the monthly dinner.

Chairman: Colonel R. Meinertzhagen

Members present, 31; Guests 12; Total, 43.

The Chairman welcomed Mr. Jack Vincent back to the Club. Mr. Vincent was home on a duty visit from Africa.

Major-General C. B. Wainwright then proposed a vote of thanks to the retiring Chairman, on behalf of all members of the Club. In reply, Colonel Meinertzhagen thanked everyone for their support during his term of office.

Desert Falcons

Mr. J. Mavrogordato, ably supported by a trained Saker and Lanner brought home from the Sudan, gave members a most interesting talk in his usual entertaining style. There is no such species as a true desert falcon, but he proposed to talk about the two species present. The Saker, he considered to be related to the Gyr, but the Lanner he thought was closer to the Peregrine. For instance, the Saker does not hunt by stooping, but by flying low and extremely fast, which is very different from the normal method of the Peregrine, but similar to the Gyr. He had seen a Saker "stalking" a pair of Sand Grouse at speed in the Sudan this winter, the birds rising and escaping just in time.

Sakers are considerably more intelligent than Peregrines and to a lesser extent, so are Lanners. A Lanneret released in 1950 in the Sudan, after being used to falconry, was still about this year and recognized Mr. Mavrogordato, but would let no other human anywhere near.

Both species are very difficult to catch and it had taken the speaker his eleven years in the Sudan to learn how to do it. The method depends upon their propensity to rob weaker species, as for instance, a Brown-necked Raven, a Kestrel or ideally a Pallid Harrier. These species are made to carry a small lure armed with numerous nooses in which the falcon becomes caught.

Using this method, he discovered that Egyptian Vultures were also keen robbers of smaller species, but the worst of all were the eagles. These were a considerable problem as they were always to be found in the same area as the falcons and will go to all lengths to get the lure, even if it only contains a dead sparrow.

A New Species of Lark from Kenya

by Mr. J. D. Macdonald

Received 3rd February, 1956

Mr. J. G. Williams of the Coryndon Museum, Nairobi, collected in June 1955 on the south-west slopes of Marsabit four specimens of lark which seem to represent an undescribed species. They belong to the genus *Mirafra*. They are not readily identified as a colour phase or geographical variant of any known species of *Mirafra*. They are not likely to be, for instance, a colour phase of the very variable *M. rufocinnamomea* for their dimensions and bill shape are not identical with specimens of that species taken in the same locality; also Williams noted that "*rufocinnamomea* is a great skulker and one can rarely see the bird after it has alighted, whereas there was no difficulty in locating this other lark on the ground; often it would run after alighting and dodge behind bushes but sooner or later it would appear and walk across some open patch." He suggested that the specimens might represent true *rufocinnamomea* (which, then, would not be conspecific with *fischeri*) a likely possibility in these *Mirafra* larks which can be very similar in the hand but quite different in the field. But the type of *M. rufocinnamomea* was examined by Captain C. H. B. Grant in 1938 who noted (in MS) that it is a close match with the type of *M. torrida* Shelley in the British Museum (Nat. Hist.), which is considered to be

conspecific with *rufocinnamomea*; the markings and general appearance of the upperparts are similar although the colour is rather less bright rufous, and the underparts are an exact match.

Williams also observed that "its field appearance was rather like that of *M. africanoides*, but unlike that species I did not see it alight in bushes, but always on the ground, often near a bush, around which it would run after alighting." Dr. H. Friedmann, who examined a specimen, says that it reminds him of an *africanoides*. But Williams found birds clearly identifiable as *africanoides* in the same locality and the specimens are not dimensionally the same, as one would expect them to be if they represented a colour phase of that species.

Another possibility considered was that they might be geographical variants of *M. albicauda*, but although their dimensions are fairly close to that species they are not a neat morphological fit with specimens on the table. Williams states that in his experience "*albicauda* always occurs in thick or high grass, flushes usually from near one's feet and has a characteristic flight when it goes away," whereas these new birds were "in areas where there is a certain amount of grass and small bushes, but also open patches of sandy soil: in other words in an overgrazed area."

There remained the possibility that the specimens might match either Friedmann's *Mirafra candida*, from the northern Guaso Niyro River, Kenya Colony, or *M. pulpa* from the Sagon River, southern Abyssinia, both of which were considered by Praed and Grant to be synonymous with *M. cantillans*. Dr. Friedmann kindly compared a specimen with the types of these forms and thought that it might be related to *M. pulpa*. However, it is, apparently, not a good match; he gives differences as great as those separating many other species in this genus and as the validity of *pulpa* itself has been questioned it seems that little can be gained by putting the two together in a species by themselves.

In general appearance, as museum specimens, it seems to me that they are most like *M. cordofanica* of Kordofan and Darfur in the Sudan. Williams is not acquainted in the field with that rather little known species and comparisons with meagre records of habits and ecology are not helpful. It is possible that these new Marsabit birds may be phylogenetically nearest *cordofanica* but because of the wide geographical gap and the distinct morphological differences between them – and also the lack of a modern revision of the genus *Mirafra* – it seems better at this stage to focus attention on the birds by giving them specific status. The species is named after Mr. Williams who has made such valuable contributions to East African ornithology.

Mirafra williamsi new species

Description: General colour of the upperparts more or less uniform brown, a colour sometimes described as Verona-brown or snuff-brown; the centres of most feathers slightly darker, this dark area being diffuse not sharply contrasting. The inner secondaries and central tail feathers sepia or dark cinnammon-brown; at the bases of the broad pale margins there are blackish lines, but much of these marginal features are abraded in old plumage. The bases and centres of the outer webs of most of the primaries are plain cinnamon-rufous as in the majority of *Mirafra* species. Throat nearly white; breast dark vinaceous-buff with darker triangular

markings; belly pinkish-buff; in the tail feathers the outer pair are pinkish-buff on outer web, rachis and most of the distal half of the inner web; second pair are pinkish-buff on distal half of outer web and tip of inner web; the remaining rectrices, other than the central pair, are dark sepia.

The bill is slightly deeper in relation to length than in other *Mirafra* of similar dimensions; although the measured difference of bill depth is only 1–2 mm. the stouter appearance is quite clear to the eye in compared specimens. Details of dimensions are: Wing, ♂ 84, ♀ 83; first primary, exposed length about 20 mm.; Tail, ♂ 54, 56, ♀ 53; Bill length (from skull), ♀♂ 15; depth, 7–8; tarsus, ♂♀ 22–24; hind claw, ♂♀ 8–10.

Colour of non-feathered parts, ♂♀: bill, above greyish horn, below pinkish-white; legs, pinkish-white; iris, brown.

Type: Adult male nearing completion of post-breeding moult: from Marsabit, Kenya Colony; lat. 2° 20′ N; long. 37° 55′ E; alt. 3,000ft.: collected by J. G. Williams on 20th June, 1955: B.M. reg. no. 1956: 6: 1.

Remarks: Three other specimens were taken in the same locality and on the same date. A second male was just commencing moult and a third was in full moult; a female was fairly well advanced in moult. Stomach contents seeds. The male in full moult is in the Coryndon Museum, and the other two specimens are in the British Museum along with the type.

I am grateful to Captain C. H. B. Grant and Mrs. B. P. Hall for examining the specimens with me; and to Dr. H. Friedmann and Mr. C. M. N. White for various comments.

Spine-Tailed Swifts of the Old World

by David Lack

Received 8th February, 1956

A revision of the genera of swifts (Lack 1956a) and of the species of *Apus* (Lack 1956b) resulted in so many changes from Peters (1940), that I thought a survey of the Old World species of *Chaetura* (in the wide sense) desirable. Happily no changes in specific nomenclature seem needed, but I felt this fact should be placed on record. I worked with the extensive series in the British Museum (Natural History) together with specimens of *C. ussheri marwitzi* and *C. melanopygia* loaned by the museums of Berlin, Stockholm and Chicago, to whom I am most grateful. For reasons given elsewhere (Lack 1956a) I treat all the Old World spine-tails in one genus; 8 genera have at times been used for the 13 or 14 species involved.

As pointed out by Amadon (1953), the West African *C. sabini* is close to *thomensis* of San Thomé, also to *sylvatica** of India and *leucopygialis* of Malaya, while *grandidieri* of Madagascar is only a little further removed. These five forest forms are allopatric, and extremely similar in size and proportions, while the first four are very similar and the last fairly similar in colour, the most prominent difference being in the length of the (usually white) upper tail coverts. The differences between them might be regarded as subspecific, but they do not overlap, so I suggest that they should provisionally be retained as five monotypic and

*D. Amadon writes that he miscalled this species *mystacalis*.

allopatric species, a curious situation; (*thomensis* might have been treated as a race of *C. sabini* but for the Asiatic forms).

C. ussheri is widespread in central Africa, with five well-marked races which differ in the shade of black on the body and the extent of the white rump, which tend to be darker and smaller respectively where the rainfall is higher. *C. melanopygia* from the east of the Belgian Congo and French Cameroon (Chapin 1939, Good 1952) is extremely similar in proportions and in having a scaly throat, but is decidedly larger, with a dark instead of white rump and abdomen, and is presumably sympatric, so is a valid species.

C. boehmi from equatorial Africa and *C. cassini* from further south seem allopatric, are extremely similar in proportions and colour, but differ markedly in size, so should be treated as monotypic species.

C. novaeguineae of New Guinea resembles *C. boehmi* in size, proportions and underparts, but is a glossy greenish blue above, suggesting affinity with *C. picina*, a monotypic species from the Philippines, which is much larger, and a glossy blue all over save for a striking white throat, in which it resembles the next species.

The remaining three forms (*Hirund-apus* section) are much larger than any others. *C. caudacuta* is widespread in eastern Asia extending south to the Himalayas, south of which it is replaced by the dark-throated *cochinchinensis*, which some workers have treated as a subspecies, but others like Biswas (1951) as a full species. Since swifts travel far, even when breeding, I feel that the status of *cochinchinensis* should be left open until precise breeding data are available from the alleged zone of overlap in Assam. Apparently *C. gigantea* also breeds in this area, but it seems highly unlikely that three such similar forms should breed in the same locality.

Omitting the *Hirund-apus* section, *Chaetura* is represented in the Old World by 11 species, of which 9 are monotypic, namely *sabini*, *thomensis*, *sylvatica*, *leucopygialis*, *grandidieri*, *melanopygia*, *boehmi*, *cassini* and *picina; novaeguineae* has 3 and *ussheri* 5 races. In marked contrast, *Apus* according to my revision comprises 10 Old World species, of which none are certainly monotypic, though *A. horus* might be, and they average 4.6 races per species as compared with 1.6 in the 11 species of *Chaetura*. The Old World spine-tails are chiefly forest forms with restricted and sometimes discontinuous distributions, a position to which they were possibly driven through competition with *Apus*, which chiefly inhabits open country. The contrast disappears in the *Hirund-apus* section, which, following Peters (1940) and Biswas (1951), has 3 species with 3, 2 and 5 races respectively.

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Note on the Plumages of the Firethroat *Luscinia pectardens* (David)

by Mr. Derek Goodwin

Received 28th January, 1956

The Firethroat *Luscinia pectardens* (David) is a rarity in collections. There are twenty specimens in the British Museum (Natural History). Of these only one is a female, and the only other female I have been able to trace is in the American Museum of Natural History. Both females were taken in north-western Yunnan. They agree with each other in being a general olive-brown above, with a russet tinge on the upper tail coverts and buffish below. A feature of interest is that both females have unmarked brown tails, whereas males of all ages have the tail black with white markings. Such a sexual difference in tail pattern is rare in the Turdidae, but the Plumbeous Water Redstart, *Rhyacornis fuliginosa* (Vigors), is a parallel example. Provided the two specimens referred to are typical females of *L. pectardens* then the colour-pattern of the rectrices suffices to distinguish the sexes in all plumages.

Of the other nineteen specimens in the National Collection, twelve are sexed as males, four unsexed specimens are in male plumage, and two juveniles and one unsexed immature have the black and white tail pattern mentioned above. This series reveals some facts about plumage changes in the males of this species that do not appear to have been described previously. The plumage sequences of the male are as follows:

The two juveniles, which are presumed to be males on the basis of tail colour-pattern, have the upper-parts dull sepia brown with obscure sooty fringes to most of the feathers and pale buffy centres to many on the neck, rump and scapulars. Below they are pale buff with sooty-brown tips to the feathers. The wing quills are paler and browner than those of adults.

Some specimens that are almost certainly immature males in their first autumn plumage retain the juvenile wing quills. On the crown, hindneck and mantle they are olive-brown, the back and wing coverts are of the same bluish-grey as in the adult but somewhat intermixed with olive-brown. One specimen, Reg. No. 1948 : 27 : 185, has the upper parts almost entirely olive-brown.

The male in the breeding season has the throat and breast bright orange or reddish-orange, bordered on either side with a black band that runs from the gape to the sides of the breast and includes the ear-coverts and facial region. The upper parts are dark bluish-grey, with a small white or greyish-white patch on each side of the neck. The wing quills are dark greyish-sepia with inconspicuous brown fringes to most of the primaries and greyish fringes to those of the inner primaries and secondaries. The tail is black and white and the underparts buffish. First year males can be identified by their retaining the more brownish juvenile wing quills, but they do not otherwise differ from adults.

In the post-breeding moult, which is total, the black and reddish-orange feathers of the face, throat and breast are replaced by buffish or whitish ones and those of the white neck patch by grey feathers with white centres. This change is clearly shown in two moulting males, taken in south-east Tibet on the 26th and 27th of July – Reg. Nos. 1938 : 12 : 13 : 14 and 15 – and one taken in July in north-western Yunnan – Reg. No. 1921 : 7 : 15 : 117.

An adult male in fresh autumn plumage is like the adult breeding male above but with the face and under parts buffish and the throat and belly nearly white. The grey and brownish fringes to the wing are, naturally, much more conspicuous than in the breeding season, by which time they have been largely lost by wear. This distinct non-breeding plumage of the adult male is very like the description given by Koelz (1954) for his new species *Luscinia daulias*.

The transition from non-breeding to breeding plumage is, unfortunately, not illustrated by any specimens. It probably occurs between February and early April, as in some related species. In adults it may, perhaps, only involve the feathers of the face, throat and breast, as in the Bluethroat *Luscinia svecica* (Linnaeus). In young males, however, it must also involve at least the feathers of the head, hind-neck and mantle. In *Luscinia cyane* (Pallas) the immature males – and perhaps also the adults – have a spring moult which is complete except for the rectrices, wing-quills and primary coverts.

Thanks are due to Dr. C. Vaurie of the Americna Museum of Natural History, for information on specimens and the loan of their only female *L. pectardens*.

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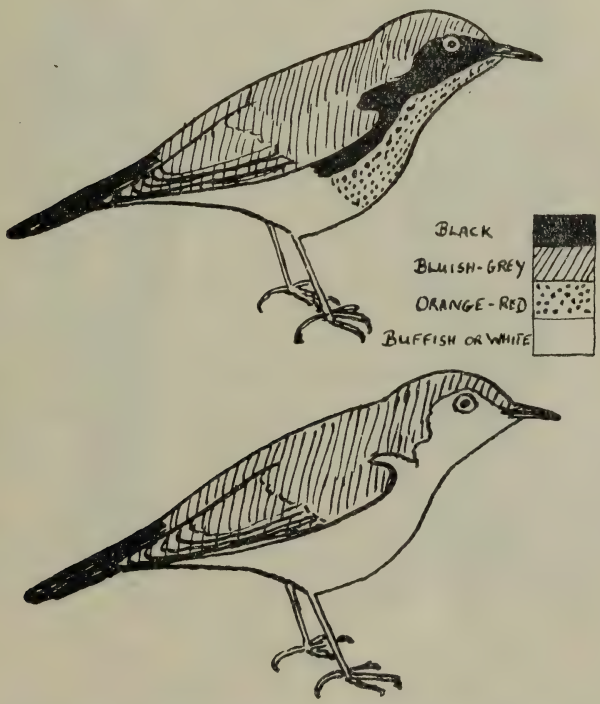

Top: Adult ♂ in breeding plumage. *Bottom*: Adult ♂ in non-breeding plumage

Plumage Changes in Wild Tubercular Wood Pigeon

By Dr. James M. Harrison and Dr. Jeffery G. Harrison

Received 10th December, 1955

Introduction. In his original work on tuberculosis in the Wood Pigeon, *Columba palumbus palumbus* Linnaeus, Dr. A. McDiarmid[1] has noted that infected birds "showed some alteration of plumage, the feathers, especially of the mantle, being darker than normal with a matt finish." The cause of this, he thought may be associated directly with the disease or indirectly as a result of lack of preening.

While Dr. McDiarmid was working primarily as a pathologist, his findings will be of much interest to ornithologists in general, for they have significance in relation to plumage colour changes without moult and to the taxonomy of the Wood Pigeon. In the past six months we have preserved and made post-mortems on four Wood Pigeon suffering from tuberculosis, three with plumage changes, and as a result we feel these should be described in continuation of Dr. McDiarmid's work and from their more general ornithological aspect.

Pathological Findings

Data	Organs infected					Culture			Type	Plumage
	Liver	Spleen	Intestine	Peritoneum	Gonads	Adrenals	Pericardium			
1. ♀ad. 13.7.'55 Seal, Kent	***	***	—	*	**	**	**	+	Rough atypical avian	Dark
2. ♂ad. 21.9.'55 Seal, Kent	***	***	—	**	—	**	—	+	Smooth typical avian	Dark
3. ♂ad. 4.9.'55 Seal, Kent	***	—	—	**	—	—	—	+	Smooth typical avian	Normal
4. ♂ad. 20.11.'55 Sevenoaks, Kent	***	**	*	*	—	**	**	+	Culture became contaminated	Dark

*=mild infection **=moderate infection ***=severe infection

Plumage changes. Concomitant with these pathological changes there are certain very characteristic effects to be observed in the plumage. These are not merely a general darkening but are also fundamental structural alterations.

As already pointed out by McDiarmid (*loc. cit.*) the feathering is darker than in normal birds and also lacks the natural bloom. In specimens we have examined the plumage shows a roughening comparable to that of excessive wear, all the feather edges being ragged and uneven, a change which accounts for the lack of bloom. That the birds are suffering from a grave constitutional disease is evidenced by the atrophic state of such fresh feathers as may have reached definitive growth during

[1] McDiarmid, A. "*The Occurence of Tuberculosis in the wild Wood Pigeon.*" The Journal Comp. Path. and Therapeutics, 1948, pp. 128-133.

the course of the disease. These, as can be seen from the plates, show abnormal feather structure, the barbs lacking the barbules and interlocking hooklets. They often show atrophic growth lines and the shafts are seen to share in the excessive melanin deposition. The rachis is sometimes transversely ridged, while the proximal feathering is almost devoid of the downy filoplumes so characteristic of normal feathers. In the wings, the exposed tips of the primaries show a greater degree of wear than that portion of the feather which is protected by being covered by the next in series. This phenomenon is of course observable in normal birds, but only when the plumage is abraided, preceding or during the moult.

In the cases now under consideration, this is not so and the new generation of feathers are seen to be structurally imperfect, showing defective barb and barbule formation.

Wood Pigeon:
Left a tubercular and right a normal bird.

Feathers: Upper tail coverts from left a normal, and centre, a tubercular Wood Pigeon. Right, a secondary from a tubercular bird. Both diseased feathers show structural defects.

In connection with this research the question of the recently described dark race, *Columba palumbus kleinschmidti* arises. Its author, Mr. P. A. Clancey[2] describes it as "the distinct indigenous populations resident in Scotland, Ireland and most of England and Wales." Certainly in so far as the breeding birds of south-eastern England are concerned, we cannot confirm that they are dark, in fact such as we have seen are typically pale individuals.

We have been accustomed to shooting examples in the early spring which were dark, but since it was prior to the discovery by McDiarmid of tuberculosis associated with darkening of the plumage, it is possible that we may have missed seeing the essential pathological lesions.

It would be well if a series of breeding Wood Pigeon from Scotland, from the *terra typica* of *C.p.kleinschmidti*, were re-examined and that particular attention should be given to this aspect of the problem in order to determine the validity of the race.

Discussion. In describing these plumage changes, which have been found to be present in three cases ranging from July to November, we feel that they must support the theory of colour change in plumage without moult, for it was only in Case 4 that any moult was observed and this was of an abnormal nature.

The mechanism required to bring this about might possibly be associated with the adrenals, for it will be seen from the chart of the pathological findings that the three dark birds all showed disease of these glands, whereas the only normally plumaged bird possessed healthy adrenals. Adrenalin and melanin both have the same precursor (Desoxycorticosterone Acetate) and if the production of adrenalin was interrupted, the result might well be an increased production of melanin. The similarity to Addison's disease of the human, in which the adrenals fail, often due to tuberculosis, inevitably springs to mind. Distinctive blood changes occur, the serum sodium, potassium and chloride altering. We hope to carry out some investigation into this in Wood Pigeons, but the difficulties of collecting the blood without causing haemolysis are very great and if this does occur, the serum potassium is increased by the potassium liberated from the red cell and a false reading is obtained.

On the other hand, McDiarmid has found plumage changes in the presence of macroscopically normal adrenals and this raises the possibility of adrenal failure as the result of toxic changes, due to the disease elsewhere. Further research into the pathology of these plumage changes is obviously indicated.

Acknowledgments. We have much pleasure in acknowledging the help we have received from Dr. K. Randall and the pathological staff of the Orpington and Sevenoaks Hospitals and from Dr. A. McDiarmid of the Agricultural Research Council Field Station, Compton. Mr. Alan Brooks very kindly allowed us to shoot over his farm at Seal, where three of the cases were collected and we would thank Dr. David Harrison for shooting Case 2.

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[2] Clancey, P. A. "*A New Race of Columba palumbus Linne from the Western Palearctic.*" Syllegomena Biologica, 1950, pp. 89-92.

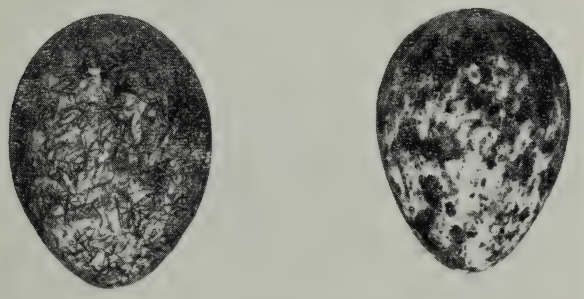
Exhibition of Eggs of Charadrius forbesi (Shelley)

By Dr. William Serle

Exhibited at the December meeting of the B.O.C.

C. forbesi and *Charadrius tricollaris* (Vieillot) are two Aethiopian Plovers so similar that many authorities including Sclater (Syst. Av. Aeth., 1924, pt. 1, p. 120) and Peters (Check-List, 1934, 2, p. 253) have regarded them as conspecific.

The eggs of *C. tricollaris* are well-known from both South and East Africa. Their markings are peculiar and very constant in character. The whole surface is covered with blackish scrawls and hair lines.



On the left the egg of *Charadrius tricollaris* (Vieillot);
On the right the egg of *C. forbesi* (Shelley).

The clutch of three eggs of *C. forbesi* exhibited was taken by me at Enugu, 6° 25′ N., 7° 30′ E., Nigeria, on 29th May, 1954. The male was brooding and was collected to confirm identification. The eggs are ovate with the narrow end somewhat compressed. The ground colour is cream tinged with pink. The markings take the form of evenly distributed rather blurred blotches and spots of sepia and olive-brown, and the ashy secondary suffusions and blotches are prominent and thickly distributed. There are no hair lines or other linear markings. They measure 31.2 × 23.2, 31.9 × 23, 30.8 × 22.6 mm.

The eggs are altogether different in ground colour and markings from those of *C. tricollaris*. On the evidence of the eggs alone these two forms cannot be considered conspecific.

There is one previous record of the breeding of *C. tricollaris*, also from Nigeria—by Brown (Ibis, 1948, pp. 529-531). From the description the eggs seen by Brown closely resembled those obtained at Enugu.

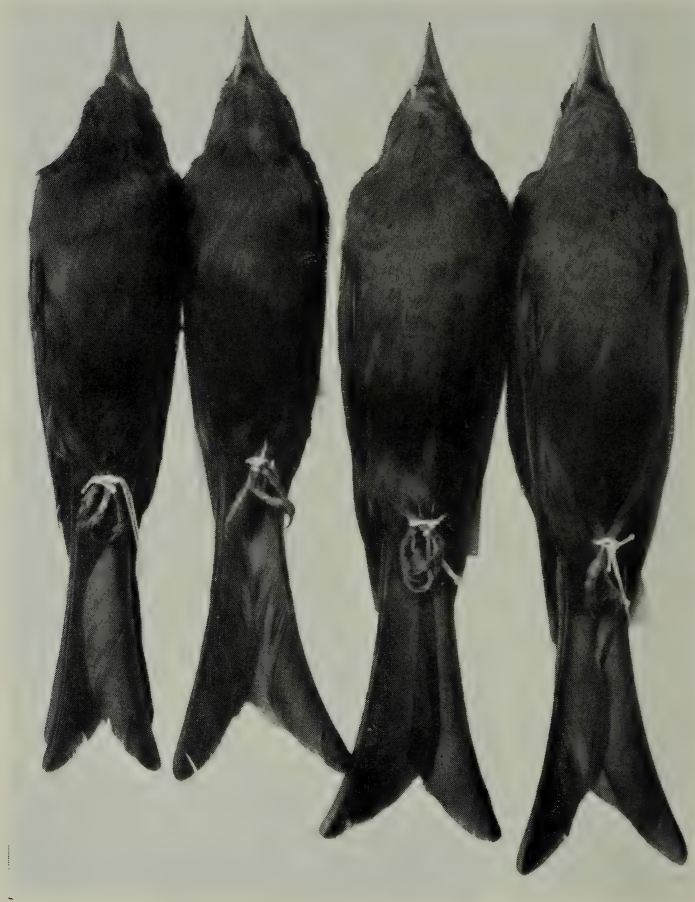
Geographical Variation in the Southern African Populations of *Dicrurus adsimilis* (Bechstein)

by Mr. P. A. Clancey

Received 28th November, 1955

The African Drongo *Dicrurus adsimilis* (Bechstein) is a glossy black passerine with a wide continental range, five geographical races being recognised in the most recent authoritative revision, that of Vaurie,

"Bulletin of the American Museum of Natural History," vol. 93, art. 4, 1949, pp. 222–231. In his classification this author accepts the modern view that the velvet-backed forms, *D. modestus* Hartlaub, 1849: Principe, and *D. coracinus* Verreaux and Verreaux, 1851: Gaboon, are conspecific with the widely distributed *D. adsimilis* and its races, pointing out that the glossy- and velvet-backed races are linked by an intermediate group of populations in the Upper Guinea forests — the race *D. a. atactus* Oberholser, 1899: Fantee, Gold Coast. Vaurie's findings are followed



Dicrurus adsimilis (Bechstein)

Left pair: *D. a. fugax*. Adult ♂♂ from Swaziland and Southern Portuguese East Africa. Right pair. *D. a. adsimilis*. Adult ♂♂ from coastal Natal

Note the much smaller size and deeper black colouration of *D. a. fugax* when compared with the nominate race
Specimens collected and preserved by P. A. Clancey.

(*Photograph*: A. L. Bevis)

by Chapin, "Birds of the Belgian Congo", part iv, 1954, pp. 6–13, but not by Mackworth-Praed and Grant in their even more recent "Birds of Eastern and North Eastern Africa", vol. ii, 1955, pp. 563–565.

The belief now generally held by workers is that only one race worthy of nomenclatural recognition, *i.e.*, *D. a. adsimilis* (Bechstein), occupies that enormous portion of the Ethiopian region which extends from the Belgian Congo (areas to the south of the rain forest), Kenya Colony and Uganda to the southern extremities of the continent. This view has not always been held, and it is a well-documented fact that the birds inhabiting the eastern low country (Tanganyika Territory, Kenya Colony, etc). tend to be smaller in all dimensions than those of the west (Angola) and the south (Cape Province, Natal, etc.). At the present time it is also considered that this size variation is clinal, with no marked step or break, and that it cannot be described adequately by the use of the trinomen. The small-sized, eastern populations have at different times been assigned by workers to *D. a. divaricatus* (Lichtenstein), 1823: Senegambia, or *D. a. fugax* Peters, 1868: Tete and Inhambane, Portugese East Africa. *D. a. divaricatus* is recognised by Vaurie as a valid race, which ranges from Senegal to the Somalilands in areas to the north of rain forest. It differs from the southern *D. a. adsimilis* as defined by Vaurie in having a markedly shallower tail-fork. *D. a. fugax* is synonymized with the nominate form by this same worker, but I hope to show that it is a recognisable race.

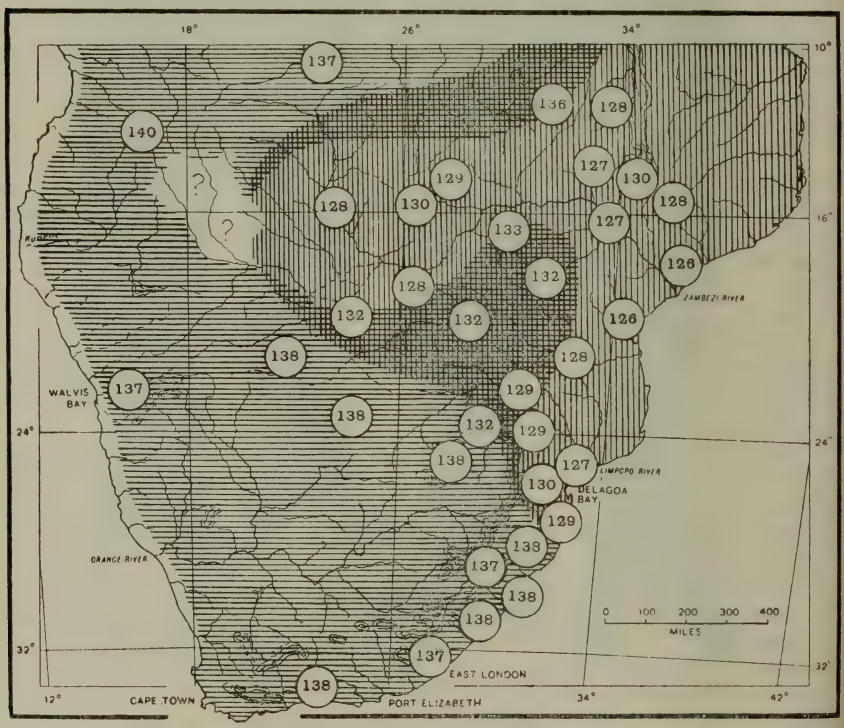
Through the kindly co-operation of the Directors of the following museums I have been able to bring together well over 200 skins of *D. adsimilis* for a detailed study of the size variations in the southern populations: Transvaal Museum, Pretoria; Natal Museum, Pietermaritzburg; National Museum of Southern Rhodesia, Bulawayo; and the Museu Dr Alvaro de Castro, Lourenço Marques. My findings, which are given below, have been based solely on fully adult birds, especially adult males.

Corvus adsimilis Bechstein was described in 1794 on the basis of material from the Cape Province of South Africa, and the precise type-locality is now generally recognised as being the Duywenshoek River, in the south of the province (*vide* Vincent, "Check List of the Birds of South Africa", 1952, p. 90; Mackworth-Praed and Grant, *op. cit.*). The wing-measurements of twelve adult birds from the southern and eastern districts of the Cape are: ♂♂ 135.5 — 140, ♀♀ 130 — 138 mm., and precisely similar measurements are available from considerably larger series from Pondoland, Natal, Zululand, and parts of the Transvaal (Pretoria). The material from Bechuanaland and South West Africa available at the present time is not exhaustive, but fully adult birds from these territories which I have measured are not smaller than topotypes, and large-sized birds are also recorded for Angola (wings of ♂♂ 138 — 143 mm.) and the Katanga and Northern Rhodesia (wings of ♂♂ 135 — 141 mm.) by Vaurie, *op. cit.*, p. 223. These collective measurements suggest that for all practical taxonomic purposes the populations of the southern Congo, north-western Northern Rhodesia, Angola, South West Africa and Bechuanaland to the Cape are mensurally the same.

Recent work in the coastal lowlands of south-eastern Africa has shown that the large nominate race occurs in Natal and most of Zululand, but is replaced in the areas immediately to the north, *i.e.*, in north-eastern Zululand (Tongaland), Swaziland and southern Portuguese East Africa

by a palpably smaller bird with wings in ♂♂ 125 — 132, ♀♀ 122 — 127.5 mm. The two races occur quite close together, because specimens in the Durban Museum collection from Melmoth, in Zululand, are *D. a. adsimilis*, while a series from near Gollel, in southern Swaziland (95 miles to the N.E.), are referable to the small race.

When viewed in series the structural differences separating the two forms are most marked (see Figures), affecting all the more important physical proportions, but in addition to these there are minutiae of plumage colouration which are considered to be of equal subspecific import. The small-sized birds are deeper, less bluish, black throughout, and the pale inner webs to the major flight feathers are appreciably whiter than in topotypes of the nominate race. The general pallor of the major flight feathers is most marked in life in these small-sized birds of the south-east African lowlands, and in the dry, colourless thorn country on a hot day birds hawking for insects seem almost to have white-tipped wings.



Map depicting the ranges and zones of intergradation of the African Drongo races, *D. a. adsimilis* and *D. a. fugax*

Horizontals = *D. a. adsimilis*. Verticals = *D. a. fugax*.

Cross-hatching = Zones of intergradation

Figures contained in circles represent the mean wing-length of local adult ♂♂ (to nearest integer), either measured for this study or from data extracted from the literature

I am of the opinion that we have two perfectly distinct geographical races of *D. adsimilis* in the low country extending from southern Zululand to southern Portuguese East Africa. The transition from one race to the other is, judging on available data, accomplished in a relatively short distance in closely similar country, and there is no obvious zone of intergration between the two forms. Reduced dimensions and lightening of the plumage colouration are common phenomena in many of the resident bird races of north-eastern Zululand, Swaziland and Portuguese East Africa, when compared with those of the Cape and Natal, and the criteria which have just been noted in respect of the indigenous populations of *D. adsimilis* parallel closely what is already well-known and accepted in our classification in the case of many other species of birds. The evidence available from this study suggests that the two forms of *D. adsimilis* belong to two discrete elements of the South African fauna, and as such warrant nomenclatural segregation..

Peters, "Journal für Ornithologie", vol. xvi, 1868, p. 132, introduced the name *Dicrurus fugax* for the small-sized birds of Portuguese East Africa, the type-localities being Tete and Inhambane, and it would seem desirable to resurrect this name for all the populations of small-sized birds which range from north-eastern Zululand and Swaziland through Portuguese East Africa, the Zambesi Valley, most of northern Rhodesia, Nyasaland and Tanganyika Territory to Kenya Colony and Uganda. All the wing-measurements which I have taken from fully adult birds collected within the range of *D. a. fugax* as here defined, in addition to those given by Vaurie, *op. cit.*, pp. 223–224, are unquestionably smaller than those available for *D. a. adsimilis*, and there is virtually no overlap (see Table).

In dealing with the populations of the lowlands of south-eastern Africa, I have shown that *D. a. adsimilis* and *D. a. fugax* replace one another extremely rapidly and that there is no marked zone of intergradation. This is, of course, exceptional and throughout most of their distribution the ranges of both races tend to overlap to a varying degree (this is clearly shown in the accompanying map). The populations of the eastern and northern Transvaal are intermediate, with wings in ♂♂ measuring 126.5–138.5 mm., and similar unstable populations are found on the Southern Rhodesian plateau and in Ngamiland (wings of ♂♂ 127 — 137 mm.), and large-sized birds (wings in ♂♂ up to 137 mm.) from Mpika, Northern Rhodesia, suggest the presence of a similar condition in areas far to the north of the Zambesi valley. Additional information given by Vaurie shows that still further north the two races intergrade in the region of Lake Tanganyika.

Earlier attempts to re-instate *D. a. fugax* as a valid race have received little support from workers, and Friedmann, "Bulletin of the United States National Musum", No. 153, 1937, pp. 61–65, dismissed the race simply on the grounds that specimens from Changamwe (near Mombasa, coastal Kenya Colony) with wings in adult ♂♂ 123.5 — 129 mm. were found not to differ in size from those of the interior districts of the same territory. Vaurie, *op. cit.*, p. 227, in supporting these findings in defence of his own actions, gives still further measurements from various districts of East Africa, but such arguments are actually quite untenable, because the question is not that of resolving in terms of nomenclature slight size

differences between contiguous eastern African populations of *D. adsimilis*, but rather one of deciding if eastern African birds are different in size to those of South Africa. On this point there need be no further doubt. The extensive measurements given by these workers fit in perfectly with the measurements taken during my recent studies, and which are here detailed:

TABLE 1

WING-MEASUREMENTS OF FULLY ADULT *D. adsimilis* IN SOUTH AFRICAN COLLECTIONS STUDIED

	D. a. adsimilis	
Cape Province, Natal, southern Zululand	♂♂	134, 135, 135, 135.5, 135.5, 135.5, 136, 137, 137, 137, 138, 138, 138, 138, 138, 138, 138.5, 139, 139, 139, 139, 139, 139, 139.5, 139.5, 140, 140.5, 142 mm.
	♀♀	130, 130, 130, 131.5, 132, 132, 133, 133, 133.5, 134, 134, 134, 134, 134.5, 136, 136, 137.5, 138, 138 mm.
29 specimens.	Range ♂♂	134–142 (Mean 137.8 mm.).
19 specimens.	Range ♀♀	130–138 (Mean 133.7 mm.).
Transvaal (Pretoria), Bechuanaland (not Ngamiland), South West Africa	♂♂	132.5, 133, 136, 136, 137, 138, 138, 138, 140, 140, 140.5 mm.
	♀♀	132, 132.5, 133.5, 134, 134, 135, 135 mm.
11 specimens.	Range ♂♂	132.5–140.5 (Mean 137.2 mm.).
7 specimens.	Range ♀♀	132–135 (Mean 133.7 mm.).
	D. a. adsimilis ≷ *D. a. fugax*	
Eastern and northern Transvaal, Southern Rhodesia, Ngamiland	♂♂	125, 126.5, 126.5, 127, 127.5, 128, 129, 130, 130, 130, 130, 130.5, 131.5, 132, 132, 132, 132, 132, 132, 132.5, 133, 134, 134, 135, 137, 138.5 mm.
	♀♀	121, 123, 125, 125, 127.5, 127.5, 129, 129, 129, 129.5, 130.5, 131, 131, 131.5, 132, 132, 132, 132.5, 132.5, 132.5, 133.5 mm.
27 specimens.	Range ♂♂	125–138.5 (Mean 131.1 mm.).
21 specimens.	Range ♀♀	121–133.5 (Mean 129.3 mm.).
	D. a. fugax	
Northern Zululand, Swaziland, southern Portuguese East Africa and Zambesia	♂♂	125, 125.5, 126, 126.5, 127, 127, 127.5, 127.5, 127.5, 129, 129, 132 mm.
	♀♀	122, 123, 125.5, 127.5 mm.
12 specimens.	Range ♂♂	125–132 (Mean 127.4 mm.).
4 specimens.	Range ♀♀	122–127.5 (Mean 124.5 mm.).
Nyasaland and south-eastern Northern Rhodesia	♂♂	127, 127, 128, 128, 129, 131 mm.
	♀♀	124, 127.5, 128, 130.5 mm.
6 specimens.	Range ♂♂	127–131 (Mean 128.3 mm.).
4 specimens.	Range ♀♀	124–130.5 (Mean 127.5 mm.).

We can conclude on the basis of the extensive series of measurements and other data now available that the race *D. a. adsimilis* of recent workers is an unsatisfactory unit, especially in view of the findings made in the area of south-eastern Africa extending from Natal to southern Portuguese East Africa. I believe that it would be more accurate for us to recognize two races instead of the current one, and the nomenclature, characters and ranges of these can be summarized as follows:

1. *Dicrurus adsimilis adsimilis* (Bechstein)

Corvus adsimilis Bechstein, "Johann Latham's Allgemeine Uebersicht der Vögel," vol. ii, part 1, 1794: South Africa. Restricted type-locality: Duwyenshoek River, southern Cape Province, South Africa.

Plumage wholly glossy black, except for primaries which have inner webs brownish. Tail deeply forked. Measurements: wings ♂♂ 134–142, ♀♀ 130–138, tails ♂♂ 116–127, culmens ♂♂ 25–28 mm. (Based on topotypical material).

Note: Young birds are smaller than adults and are duller in plumage, the under-surfaces flecked with white. The adult plumage is not attained until the second complete moult.

Range: The Cape Province, Natal, southern Zululand and most of the Transvaal northwards in the west through Bechuanaland and South West Africa to Angola, north-western Northern Rhodesia and the Belgian Congo in areas to the south of the equatorial rain forest. Intergrades with *D. a. fugax* in the eastern and northern Transvaal, the Southern Rhodesian plateau, Ngamiland, parts of Northern Rhodesia, and in the Lake Tanganyika area, and replaced by *D. a. coracinus* of the forested regions of the Congo, which occurs to the north of its range.

2. *Dicrurus adsimilis fugax* Peters

Dicrurus fugax Peters, "Journal für Ornithologie," vol. xvi, 1868, p. 132: Tete and Inhambane, Portuguese East Africa.

Similar to *D. a. adsimilis* but rather deeper, less bluish black, and with the inner webs of the primaries paler. Much smaller in size.

Measurements: Wings ♂♂ 125–132, ♀♀ 122–130.5, tails ♂♂ 108–117, culmens ♂♂ 22–24 mm. (Based on all available adult specimens).

Range: North-eastern Zululand, Swaziland and southern Portuguese East Africa to the Zambesi Valley, the south-eastern half of Northern Rhodesia and Nyasaland northwards in the east to Tanganyika Territory, Kenya Colony and Uganda. Intergrades with *D. a. divaricatus* to the north of its range and with *D. a. adsimilis* to the west, as recorded above.

Note: *D. a. divaricatus* differs from *D. a. fugax* in having the tail much less deeply bifurcated, while the nominate race is similar to the latter in this respect.

Remarks on the nidification of the Forest-Robin *Stiphrornis erythrothorax* Hartlaub

by Dr. William Serle and Capt. Charles R. S. Pitman

Received 19th January, 1956

Hitherto all that was known of the nidification of *Stiphrornis erythrothorax* was a brief note by Bates (*Birds of West Africa*, 1930, p. 398) on *S. e. xanthogaster* Sharpe describing a shallow nest of moss said to have been found hidden at the base of a tree in the forest.

The systematic position of *Stiphrornis* Hartlaub has for long been in doubt. Reichenow (*Vog. Afr.* iii, 1905, p. 623) and Sclater (*Syst. Av. Aethiop.* ii, 1930, p. 546) placed it amongst the *Sylviidae*, Jackson (*Birds of Kenya Colony and Uganda Prot.*, ii, 1938, p. 1088) following Sclater, whilst Bates (loc.cit.) and Chapin (*Birds of Belg. Congo*, iii, 1953, p. 507) place it amongst the *Turdidae*.

Recent information about the nest and eggs of *S. e. erythrothorax* and *S. e. mabirae* Jackson confirms the claims of Bates and Chapin .

S. e. erythrothorax

On 3rd April, 1953, in the Mamu Forest, Onitsha Province, Nigeria, one of us (W.S.) found a nest in high primary forest. The female was watched back to the nest and secured. The site was a niche between the bole and a buttress of a great tree three feet above the forest floor. The bulk of the nest was of damp green moss mixed with bits of bark, and there was a well-defined inner lining of short thin fibrous strips. An open cup, somewhat asymmetrical in conformance with the irregular contours of the niche. Total depth 110 mm.; inner depth of cup 40 mm.; external measurement at the rim 95 x 80 mm.; internal measurement at rim 65 x 50 mm.

The two half-incubated eggs measured 21.3 x 14.6 and 21.7 x 14.7 mm. They are ovate with the small end truncated and the shell is smooth and slightly glossy. The green ground is thickly and indistinctly blotched and spotted with reddish-brown and orange-brown. The markings are confluent about the broad end where they form a solid rich reddish-brown cap.

Stiphrornis e. mabirae

W. J. Eggeling of the Uganda Forest Department found a nest on 6th March, 1940, in the Budongo Forest in central Uganda. The eggs, on the point of hatching out and impossible to clean, and the nest were sent to C.R.S.P. Measuring 20.7 x 14.4 mm. and 20.9 x 14.3 mm., the eggs were bluntly ovate, somewhat glossy and resembled in miniature eggs of *Cossypha heuglini* Hartlaub. Ground colour pale olive-greenish, almost totally obscured by fine markings of various shades of dull reddish and pale chestnut, producing a general brownish-red effect. A few scarcely perceptible underlying marks of pale mauve and lilac, and a distinct ring-zone of these shades at the top of large end of each egg.

The nest was on the ground in dead leaves in the hollow formed by two buttresses of a small tree in dense, high canopy forest. The foundation was dead leaves and the cup composed of soft green moss, thickly lined with black hair-like *Mycelium* and a few very fine blackish rootlets. Very roughly, owing to distortion in transit, the cup was about 63.5 mm. in diameter and 38 mm. in depth.

The parent was not collected, but Eggeling is a competent ornithologist and I have complete confidence in his identification: *Stiphrornis* at close quarters is unmistakeable. In forwarding the nest and eggs he wrote "you need have no fear as to the authenticity of these eggs although unsupported by a skin. I had a perfect view of the brooding bird both on and off the nest and have absolutely no doubt as to the diagnosis." Eggeling stressed its robin-like appearance, its relative tameness and the speed with which it returned to its eggs. According to Bannerman (*Birds of Tropical West Africa*, iv, 1936, p. 413), referring to the race *gabonensis* Sharpe, Boyd Alexander found it "a tame and confiding bird, reminding him in its habits of our English robin."

Apart from the unmistakeable turdine behaviour of *Stiphrornis*, the nest and eggs too are typically turdine and provide the taxonomist with a diagnostic for the correct placing of the genus. Dr. Serle's specimen and eggs were exhibited at a meeting of the B.O. Club on 13th December, 1955.

First Record of the Chinese Lesser Crested Tern, *Thalasseus zimmermanni*, from Thailand

by Mrs. B. P. Hall

Exhibited at the February meeting, 1956

Among the unrecorded specimens from the Williamson collection are three males in winter plumage of the Chinese Lesser Crested Tern, *Thalasseus zimmermanni* (Reichenow), shot by one of Sir Walter's collectors at Nakhon Sithammarat, east coast Peninsular Thailand, on 22nd November, 1923. Since the only specimens recorded of this rare Tern are from Shantung, Foochow and the Philippine Islands, this is a notable extension to its known range; the three specimens are the first of this species in the National Collection.

On the collector's labels the colour of the bill is given as "deep yellow" but even in the skin the black apical half, characteristic of the species, is evident. The black extends from the extreme tip, which is pale horn in the skin, for about 23 mm. towards the base, on both upper and lower mandibles. The legs are black and the colour of the iris is recorded as dark brown. In all three specimens the wings are in moult and the tips of the old primaries are worn and damaged so that the full length cannot be measured; the damaged wings measure 300, 305, 308 mm.: bills 60, 61, 64 mm.: tails 146, 131, 138 mm.

Note on Sir Walter Williamson, C.M.G. and his Bird and Egg Collections from Thailand

by Mrs. B. P. Hall

Based on remarks made at the February meeting, 1956

Sir Walter Williamson went out to Thailand in the early part of the century as Financial Advisor to the Government. During his residence there he made considerable collections of birds and eggs; many of these he collected himself, mostly in the vicinity of Bangkok and other towns in the lower part of the country; he also sent collectors further afield, notably to north-western Thailand, which was then virtually unknown ornithological territory, and to the coast of Cambodia, Cochin China and Pulau Condore. He was also one of the organisers of an expedition in 1919 to the Mekong River (*Ibis* 1931: 319–341 and *Bull. Brit. Orn. Cl.* 41, 1920: 10) and many of the birds collected on it were retained in his own collection.

When he left the country in 1925 he was appointed to Estonia, and his collections with the exception of 250 skins which he had presented earlier, were boxed and stored at the British Museum (Natural History) until such time as he had an opportunity to work on them. Unfortunately this was not possible until 1948, for he retired only a short time before the outbreak of war and during the war his collections were sent to Tring for safe keeping. In 1949 he presented the egg collection to the Museum; it consists of about 4,500 eggs of over 100 different species and is undoubtedly the finest collection ever made from Thailand. The eggs were checked and worked on by the late Mr. W. E. Glegg at Tring. Sir Walter himself made

a start on the skin collection and was preparing notes on his specimens up to the time of his last illness. He died in the autumn of 1954 leaving the Museum his collection of 6,200 skins of 550 species; it includes three types and many forms new to the collection, and is invaluable as a link between the extensive material from Burma, Indo-China and Malaya already in the Museum.

Sir Walter published some notes on his early collections in the *Journal of the Natural History Society of Siam* (vols. 1–3, 1914–1919), a journal of which he was co-editor; others of his skins were studied and recorded by Robinson and Kloss in "The Birds of South-west and Peninsular Siam (*Journ. Nat. Hist. Soc. Siam* 5, 1921–24) and in other papers by these workers. More recently Sir Walter published further notes (*Ibis* 1945 and 1947) but a large part of the collection remained unrecorded.

Although all the skins have now been studied it is not proposed to publish a paper on the whole collection. Notes on all specimens have, however, been sent to Mr. H. G. Deignan of the United States National Museum, Washington, so that any new records for Thailand, or extensions of ranges of races based on Sir Walter's specimens, may be included in the check list of Thai birds which he is preparing.

BRITISH MUSEUM

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DINNERS AND MEETINGS FOR 1956

15th May, 18th September, 16th October, 20th November, 18th December.

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Contributors who desire free copies of the Bulletin containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. As the proofs will be corrected by the Editor, it is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Committee have decided that in future the Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions up to 1,500 words on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

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Edited by
DR. JEFFERY HARRISON

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No. 6 1956

BULLETIN
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Volume 76
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Published: 1st September, 1956

Owing to the inability of the proposed speaker to attend on Tuesday, 15th May, no meeting or dinner was held in May.

Two New Races of Weavers (Ploceidae) from Mozambique

by MR. P. A. CLANCEY

Received 9th January, 1956

During the recent Durban Museum Expedition to Swaziland and southern Mozambique (August – September, 1955) particular attention was paid to the various weavers occurring in that sector of south-eastern Africa. A series of ♂♂ in breeding dress of the Spotted-backed Weaver *Ploceus spilonotus* Vigors collected by the expedition shows that the Mozambique populations differ markedly from those of the eastern Cape Province (topotypical) and Natal and appear to warrant segregation as a new race. The Thick-billed or Grosbeak Weaver *Amblyospiza albifrons* (Vigors) specimens collected by our party are referable to two quite distinct races: the nominate one which was taken just to the north of Lourenço Marques, and a much smaller and paler form which occurs to the northward. This latter race is apparently without a name and is formally described below.

I am grateful to Dr. A. A. da Rosa Pinto, Director of the Museu Dr. Alvaro de Castro, Lourenço Marques, for permitting me to study the extensive collection of Mozambique birds housed in that institution, and for so readily arranging the necessary permits and introductions which enabled the Durban Museum party to operate in Portuguese territory with the utmost facility. Thanks are also due to Dr. G. Rudebeck, Ornithologist of the Transvaal Museum, Pretoria, Mr. J. G. Williams, Ornithologist of the Coryndon Memorial Museum, Nairobi, and Miss M. Courtenay-Latimer, Director of the East London Museum, for the loan of essential comparative material.

Ploceus spilonotus dilutescens, subsp. nov.

Type: ♂ adult. Palmeira, north of Manhiça, Sul do Save, southern Mozambique. 26th September, 1955. Collected by P. A. Clancey. In the collection of the Durban Museum.

Diagnosis: Adult ♂ in breeding dress similar to *P. s. spilonotus* Vigors, 1831: Algoa Bay, Cape Province, but differs in having the yellow tips and

edges to the mantle, rump and wing feathers much lighter, less deep golden yellow. Black mask and throat more jet, less sooty, black. Ventrally much paler yellow, particularly on the abdomen, than in the nominate race. Using the colour nomenclature of C. and J. Villalobos, "Colour Atlas", Buenos Aires, 1947, the ventral colouration of *P. s. dilutescens* reads YYO-16–12°, that of the nominate race OY–15–12°. ♀ in breeding dress not at present known. ♂ and ♀ in non-breeding dress paler and clearer grey on mantle and whiter below, less dusky on the flanks, than in *P. s. spilonotus*. Similar in size.

Measurements of the Type: Wing (flattened) 91, culmen from base 23, tarsus 24, tail 57.5 mm.

Range: Southern Mozambique, Swaziland, eastern and northern Transvaal, and presumably the extreme north-eastern part of Zululand. The populations of this weaver which are found to the west of the stated range of *P. s. dilutescens* should also perhaps be placed here. The species is recorded in the literature as occurring to the north-west at Lake Ngami, as well as in Southern and Northern Rhodesia, but the evidence is in most instances highly unsatisfactory, and, indeed, there is no recent or properly authenticated record of its occurrence in Southern Rhodesia (R. H. N. Smithers *in litt.*). It is considered unlikely that this species of weaver occurs as a breeding bird in territory where the extremely closely allied (if not conspecific) *Ploceus nigriceps* (Layard) is to be found.

Material: Breeding ♂♂: *P. s. dilutescens*, 14 (southern Mozambique 8; Swaziland 2; eastern and northern Transvaal 4). *P. s. spilonotus*, 16 (eastern Cape Province 4; Natal 12). ♀♀ and non-breeding ♂♂ and ♀♀ of both races, 25.

Remarks: The discovery of this new form in southern Mozambique is interesting in that it has revealed the existence of demonstrable polytypic variation in a species which has always been considered to show no variation at all. The pattern of the geographical variation in *P. spilonotus* is precisely similar to many other species whose races have comparable ranges in south-eastern Africa.

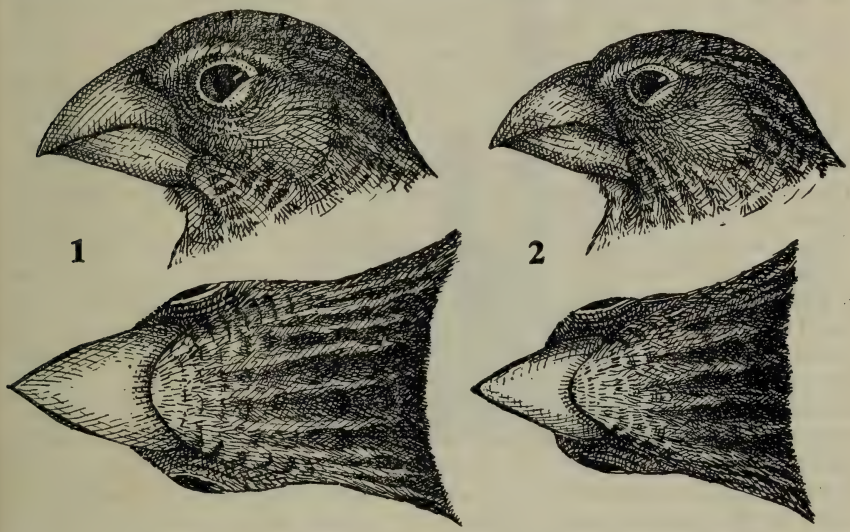
With the description of this new race, the range of the nominate subspecies can be defined as follows: the eastern Cape Province from about Port Elizabeth to Pondoland, mainly in the coastal districts, and in Natal and southern Zululand.

Amblyospiza albifrons woltersi, subsp. nov.

Type: ♀ adult. Manhiça, Sul do Save, southern Mozambique. 27th September, 1955. Collected by P. A. Clancey. In the collection of the Durban Museum.

Diagnosis: The adult ♀ differs from that of *A. a. albifrons* (Vigors), 1831: Algoa Bay, Cape Province, in being paler on the upper-parts and less heavily striated ventrally. In size very much smaller, thus—wings (flattened) of 4 ♀♀ 83—86.5 (85.0) as against 90.5—96 (92.8) mm. in a series of *A. a. albifrons* from the eastern Cape and Natal, tails 59—61.5 (60.6) and 66—70 (68.0) mm. respectively. The bill is also much less massive (see figures). The characters of the adult ♂ are unknown, but are presumably similar to those of the adult ♂ of *A. a. unicolor*. Compared with *A. a. unicolor* (Fischer and Reichenow), 1878: Zanzibar, the ♀ of *A. a. woltersi* is similar in size, but differs in being paler and less uniform

dark rusty brown on the upper-parts, and in having the ground colour of the ventral surface white, with no buffish wash. The ear-coverts are also less dark and rusty, as are the wings and tail. *A. a. montana* van Someren, 1921: Fort Hall, Kenya Colony, resembles *A. a. unicolor* but the ♂ is larger and the ♀ still darker on the upper parts and more strongly tinged with buff ventrally. *A. a. maxima* Roberts, 1932: Kasane, Chobe River, of northern Bechuanaland and Barotseland (western Northern Rhodesia), is larger than the nominate race and the ♂ is blacker below.



Amblyospiza albifrons (Vigors)

Figures of female specimens showing the marked size difference in the bills of two races of *A. albifrons* occurring in south-eastern Africa.

1. *A. a. albifrons* 2. *A. a. woltersi*

Measurements of the Type: Wing (flattened) 84.5, culmen 19.5, tarsus 22, tail 59 mm.

Range: Southern Mozambique and adjacent eastern Southern Rhodesia. Northern limits not yet known.

Material: *A. a. woltersi*, 7. *A. a. albifrons*, 34 (eastern Cape Province 9; Natal 20; north-eastern Zululand 1; Transvaal 2; extreme southern Mozambique 2). *A. a. unicolor*, 10. *A. a. montana*, 2. *A. a. maxima*, 6.

Remarks: At Vila Luiza, just north of Lourenço Marques, we collected two specimens which can be placed as the nominate race, their proportions being large and in agreement with my material from the eastern Cape Province and Natal, though the ♀ is paler dorsally. Further north, at Manhiça, which is also on the banks of the Incomati River, we found only the small *A. a. woltersi*, which was in flocks in native cultivations, consorting with *Euplectes albonotata* and *Passer griseus*. From these observations, and also on the basis of the material in the collection of the Museum Dr. Alvaro de Castro, it would appear that two quite discrete

races of this weaver occur in southern Mozambique. The precise range limits of *A. a. woltersi* are not known, but it presumably enjoys a wide distribution in the low, hot coastlands of Mozambique. Like the contiguous form, *A. a. unicolor*, *A. a. woltersi* is small and relatively weak-billed, and the two races almost certainly meet in the lower Zambesi area, as *A. a. unicolor* is found as far south as southern Nyasaland, specimens in the Transvaal Museum collection from Mpimbi, Nyambadwe (Blantyre), Chinteche and Chikwawa being referable to it. Benson, "Check List of the Birds of Nyasaland," 1953, p. 76, places Nyasa birds as nominate *A. albifrons*, but the accuracy of this finding is not borne out by a study of several specimens of Benson's own collecting.

Most recent standard works on Ethiopian birds (*vide* Chapin, "Birds of the Belgian Congo," part iv, 1954, pp. 298–299; Mackworth-Praed and Grant, "Birds of Eastern and North Eastern Africa," vol. ii, 1955, pp. 939–940, etc.) give nominate *A. albifrons* as ranging from the southern Congo and southern Tanganyika Territory to the eastern Cape Province. Owing to lack of material from many important areas it is not possible for me to revise the several races which actually occur in the austral parts of the species' wide continental range, but I can state that *A. a. albifrons* is limited in its distribution to the eastern Cape Province, Natal, Zululand, the Transvaal and extreme southern Mozambique. In this race, and the closely allied *A. a. maxima*, the bill reaches its most massive proportions, but the wing length, though large, is equalled by other races, *e.g.*, *A. a. montana*, *A. a. melanota*, etc. These marked differences in the bill-size between some of the races suggest the existence of local differences in feeding habits. The nominate race spends most of its time in forests, feeding on the hard-stoned fruits of forest trees, and the birds only leave such an environment in the breeding season, when they resort to reed-beds for nesting purposes. As already noted above, we collected our non-breeding *A. a. woltersi* in cultivation and not forest, which indicates that differences in food preference and feeding habits exist between these two southern races of this weaver, and are, perhaps, responsible for the salient variation in bill-size.

Text Figures

This new race of *A. albifrons* is named for Herr H. E. Wolters, the well-known German systematist, in recognition of his services to our understanding of the African Ploceidae.

On the Systematic Position of the Yellow Bunting, *Emberiza citrinella* Linnaeus in Hungary

by Dr. L. Horváth and Dr. A. Keve

Received 25th February, 1956

I. *Introduction.* The Yellow Bunting, *Emberiza citrinella* Linnaeus. is a very common bird in Hungary and is to be found in all suitable biotops throughout the country. The great individual variation both in colour and size stimulated the authorities of the National Museum to collect a large series of this interesting species. They were collected in the

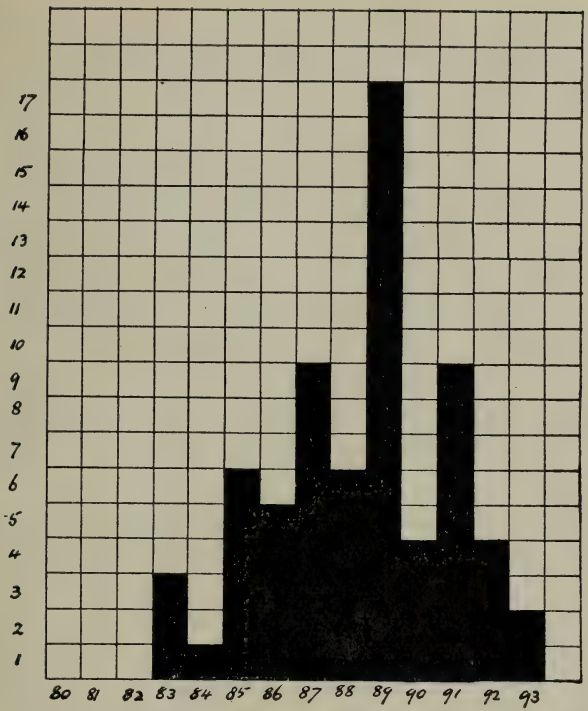


FIG. I *E. citrinella.* Wing measurements of Eastern Population.

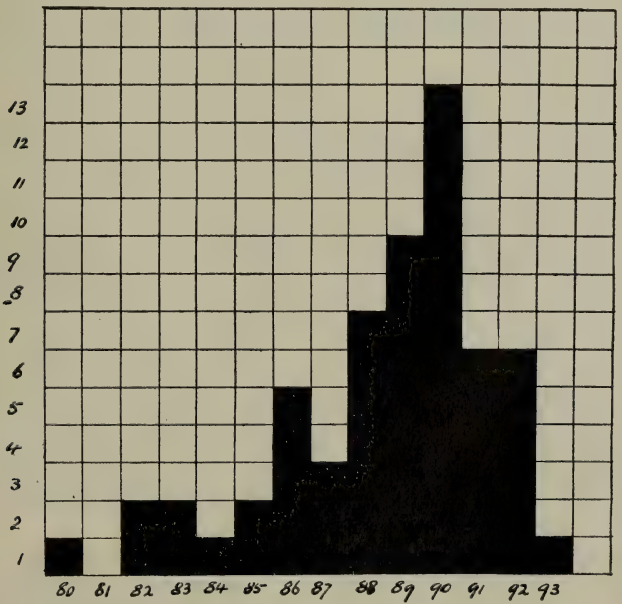


FIG. II *E. citrinella.* Wing measurements of Western Population.

whole Carpathian Basin. This material and the recent researches of Dr. James M. Harrison (1954) provided us with the opportunity to study the systematic position of the population of the Yellow Bunting in the Basin of the Carpathians.

II. *Methods.* The material which we have studied consits of 124 adult ♂ from the collection of the Hungarian National Museum, 5 specimens from the collection of the Hungarian Institute of Ornithology and 3 from the collection of Dr. I. Pátkai. We are grateful to him for his kind help. Unfortunately the comparative material outside the Carpathians was small, so we could not make a revision of Dr. Harrison's results but we have applied his methods to our series. Our comparative material outside the Carpathians consisted of 30 adult ♂ as follows:— 1 Swedish, 15 Baltic, 3 U.S.S.R., 10 Central German birds and 1 Balkan specimen.

We have measured the wings and tails to 0.1 mm. On colour variation we could separate these skins into two well marked groups, which we arranged primarily according to seasons and then into geographical distribution.

III. *The Races of the Yellow Bunting in the Basin of the Carpathians.* All the Hungarian ornithologists referred the Hungarian Yellow Bunting to *E. c. citrinella* Linnaeus, and so have other ornithologists. Harrison was the first to refer the Central European birds to *E. c. sylvestris* Brehm as distinct from the Scandinavian populations, and to state that the population of the Basin of the Carpathians is intermediate between *E. c. sylvestris* Brehm and *E. c. erythrogenys* Brehm. This is what we seek to confirm. Both races have bright yellow undersides, so we cannot distinguish them from each other by the colour of these parts; we can only affirm that there are two readily recognisable groups, one a bright yellow, the other being somewhat paler. The dispersal of these variations is approximately equal, but they show no seasonal nor geographical relationship.

IV. *Measurements.* We have measured the wings of the 124 ♂ from the Basin of the Carpathians and of the 30 ♂ from other countries with a sliding caliper and not with a rule—this point is important because it accounts for a difference of about 1 mm. between our results and those of Dr. J. M. Harrison. We do not show the 0.1 mm. on our histograms of wings, which show the measurements to the nearest millimetre. We have also measured the tails of our series, but do not consider that the results indicate a determining character, so these are not published. The geographical distribution of our material was most fortunate in that we could divide it into a western and an eastern half of the Carpathian Basin, the material being numerically approximately equal; from the west 58 skins, from the east 66 skins of adult ♂. We lacked skins from the central territory (Alföld – Hungarian Plain), but this circumstance showed us clearly that the Yellow Buntings of the eastern part of the Basin are mostly short winged, 89 mm. or shorter (Fig. I.), while those of the western end have a relatively long wing, 90 mm. or longer (Fig. II.).

This result confirmed the opinion of Dr. J. M. Harrison, that the populations of the Yellow Bunting in Hungary are very mixed. We can complete his results by stating that the western populations approach

those of the populations of Czeckoslovakia to the north-west, and the birds of Austria to the west and to the populations of Croatia to the south-west. The population of west Hungary, westwards of the Danube is very close to the race *E. c. sylvestris* Brehm, whereas the Yellow Buntings eastwards of the Tisza river, especially from Transylvania show a close affinity to the north-east to the populations of the U.S.S.R., and to the south-west to the populations of Rumania, so that the populations of the eastern part of the Basin of the Carpathians approach very closely the race *E. c. erythrogenys* Brehm.

We have arranged our material according to colour in two groups: (I) paler type; (II) brighter fulvous type. In our material, 63 specimens belong to the first group, 60 specimens to the second. One skin was not used on account of its chlorochroism. It is true that there are some individual variations, especially from south Transylvania, which are not to be distinguished from the typical *E. c. erythrogenys*, but even the series does not conform to colour nor on measurements. The material demonstrates a heterogenic population, as the following table shows. (A—birds in nuptial plumage from 1st February to 31st July; B—birds in moult from 1st August to 31st January. I—Pale colour group; II—bright colour group).

Western Part of the Basin of the Carpathians

		I.	II.
North-western Carpathians	A.	1	4
	B.	1	1
Pannony (Trasdanuby)	A.	13	5
	B.	9	10
Croatia (Adria district)	A.	1	3
	B.	1	2

Eastern Part of the Basin of the Carpathians

North-eastern Carpathians	A.	2	—
	B.	3	4
Transylvania	A.	23	23
	B.	3	2
South-eastern Hungarian Plain (Alföld)	A.	4	4
	B.	2	2

We investigated the moustachial stripe of our specimens after the results of V. Malzev (1941), but in our series there are only 3 or 4 skins with moustachial stripes and then only feebly developed.

Summary. 1. The authors have studied the following material from the Carpathian Basin—124 adult ♂ Yellow Buntings and 30 from other parts of Europe.

2. The result of this study shows that the Yellow Bunting populations of the western part of the Basin is very close to the Central European form *E. c. sylvestris*, while the population of the eastern part is close to *E. c. erythrogenys* Brehm, but the populations are very mixed.

References

1. Harrison, Dr. James M., "Remarks on the Taxonomy of the Yellow Bunting, *Emberiza citrinella* Linnaeus", *Bull. B.O.C.*, Part I, Vol. 74, pp. 105-112; Part II, Vol. 75, pp. 6-12; Part III, Vol. 75, pp. 17-21.

2.

A New Race of Leafbird from Indochina

by Mrs. B. P. Hall and Mr. H. G. Deignan

Received 21st January, 1956

A study of the skins of the Leafbird *Chloropsis cochinchinensis* Gmelin from Burma, Thailand and Indochina in the United States National Museum, Washington, and the British Museum (Natural History), London, has shown some taxonomic revision to be necessary. Members of the genus *Chloropsis* are not easy to study on the museum table since, through some quality in the feathers, a slight change in the angle at which the light falls on them gives the effect of altering the tone. Both of us experienced some difficulty in laying out specimens so that the light fell consistently on them, and it was found that the most satisfactory method was to lay the skins on their sides in a row. When this was done with the males it was seen that four races can be distinguished in these countries, as follows—

1. *Chloropsis c. seri-thai* Deignan 1946, of Peninsular Thailand and north-eastern Malaya, has sapphire-blue wings, a yellow band from the lores covering the side of the neck to connect the black of the gorget with the gold suffusion of occiput, upper back and lower breast, and a heavy bill.

2. *Chloropsis c. cochinchinensis* of Cochinchina, southern Annam, Bas Laos, Cambodia, south-eastern Thailand and the south-eastern part of the eastern Siamese plateau, has the wings paler blue, the same yellow band covering the side of the neck, and a less heavy bill.

3. *Chloropsis c. chlorocephala* (Walden) 1871, of western and northern Thailand and Burma, has the wings and bill as in *cochinchinensis* but has the yellow band on the side of the neck generally duller and less distinct. (On the limited material from Assam in the British Museum it is not possible to recognise the characters ascribed to *Chloropsis c. chloreus* Koelz 1954).

4. *Chloropsis cochinchinensis subsp. nov.* of north-eastern Thailand, northern Laos and Annam, and Tonkin, has the yellow band even duller and narrower and much less gilding on the side of the neck.

Thus, while it is not easy to distinguish single specimens of the western race *chlorocephala* from *cochinchinensis* birds from northern Indochina are readily separated from both *chlorocephala* and those of the south. The relative darkness of northern birds was noted by Delacour (Oiseau 1951: 94). Thirty males and twenty females of the new northern race have been studied in comparison with large series of the other races.

We propose that the new race shall be named in honour of Sir Norman Kinnear, C.B.

Chloropsis cochinchinensis kinneari subsp. nov.

Type: ♂ Bao-Ha, Tonkin, collected by H. Stevens, 29th October 1923. In the British Museum, registered number 1924. 12. 21. 104.

Description: The darkest and dullest of all races of *Chloropsis cochinchinensis*. Closest to *chlorocephala* of Burma, but lacking in both males and females most of the gold suffusion on the head, neck and upper breast, and having the green of the back darker, devoid of golden suffusion: in the male having the yellow band bordering the black gorget narrow and dull.

Range: Tonkin: N. Annam (Phuqui; Khebon): N. Laos (Xien-Khouang): N.E. Thailand (Loei, Sakon Nakhon, and Nakhon Phanom Provinces).

A Note on the Polynesian Black or Sooty Rail *Porzana nigra* (Miller) 1784

by Miss Averil Lysaght

Received 27th January, 1956

The Polynesian Black or Sooty Rail appears regularly in current literature as *Porzana tabuensis* (Gmelin) 1789, although Sherborn and Iredale pointed out as long ago as 1921 that Miller's name of *Rallus nigra* was the earliest one given to this bird. In view of one or two mis-statements that have appeared about Miller's work it seems worth while recording briefly what is known of the early accounts and records of this species.

This widely distributed little rail was discovered at Tahiti and painted by Georg Forster (*Icon. ined.*, 1, pl. 130) on Cook's second voyage, 1772–1775. Forster's plate was copied by J. F. Miller and published as No. 50 in the series issued 1776–1792 (Sherborn and Iredale, 1921) under the title "Various Subjects of Natural History". The interleaved text gave no particulars except for the name of the bird, *Rallus nigra*, and the locality, Otaheite. Miller's plate is very close to Forster's save that the bird is depicted standing instead of crouching, that it is almost uniformly black and only slightly paler below, instead of having a grey head and undersurface contrasting with the back and wings, and that the iris and legs are bright chestnut brown instead of red. In the second edition of Miller's plates, the "Cimelia Physica" published in 1796, the bird is uniformly sooty above and below; both editions of the plates were hand coloured and Sherborn has already pointed out that the colouring in the second edition is less accurate than in the first.

Porzana nigra is fairly stable in colouring throughout its range though there is some variation with age in the colouring of the undersurface and the soft parts. There is also some variation in size. Latham in 1785 (pp. 135–136) separated the Tabuan from the Tahitian Rail, and four years later his accounts, slightly shortened, were translated into Latin by Gmelin and published as descriptions of *Rallus tabuensis* and *R. tahitiensis*; Gmelin gave no reference to Miller's plate. Amadon (1942) has now recognised two races of what he calls *Porzana tabuensis*.

When Miller's "Cimelia Physica" was published in 1796 the plates were accompanied by textual descriptions by George Shaw; the Polynesian Black Rail appeared under the name of *Rallua tabuensis*, and Latham's Tabuan Rail was placed, with a query, in the synonymy of the species. Shaw remarked that the rail had been discovered when Banks was in the Pacific, a statememt of doubtful validity, probably arising from the fact that Forster's plates were in Banks's possession; he also noted that there was some variation in colour and that some specimens were brownish and lighter in colour than the bird in the published plate. This was also noted by William Anderson, (*Char. brev. av.*, p. 4) surgeon and naturalist, who sailed with Cook on the second and last voyages, and whose MS. notebook on the birds collected on these voyages still survives.

Owing to the rarity of the first edition of Miller's plates, and to the fact

that in the second edition the rail appeared under one of the names given to it by Gmelin, Miller's *Rallus nigra* fell into oblivion and remained there until Sherborn and Iredale published their findings on the dates of Miller's plates in 1921, with a list of the names involved. They considered that Gmelin's name was antedated by Miller's, but did not know whether there might not be some differences between the birds from Tonga and Tahiti, nor how they were related to the black rail from Henderson Island in the Tuamotu group, which has now been placed in another genus, *Nesophylax*. Mathews (1927, p. 92) accepted Miller's name as correct for the Polynesian Black Rail from Tahiti, Tonga and Fiji, but considered that the birds from the last two island groups were distinct races.

Peters (1934, p. 188) discussed Miller's plate but was incorrect in one or two details. He stated that Miller gave no locality whereas, as pointed out above, Otaheite is clearly stated to have been the type locality. He also said that Miller depicted a wholly black rail, and that his bird was rather larger than *tabuensis*, whereas the exposed culmen of the bird figured is 19 mm. the length of the wing 72.5 mm. and the tarsus about 32 mm., measurements which do not exceed some given by Amadon (1942) in the large series of skins collected by the Whitney expedition. Peters placed Miller's bird doubtfully in the synonymy of *Nesophylax ater* (North) 1908, but in view of what has been stated above there seems little doubt that this view cannot be adhered to, and that the very widely distributed species about which Amadon has given so many interesting details should be known as *Porzana nigra* (Miller) 1784.

My attention was drawn to this question of nomenclature when I was cataloguing Georg Forster's bird paintings for the Hakluyt Society; I am most grateful to the Secretary of that body, and to Mr. J. D. Macdonald of the Bird Room, British Museum (Natural History), for the facilities placed at my disposal. I am happy to record my debt to Sir Norman Kinnear for his kind help over the preparation of this note.

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Notes on the Drinking Habits of Birds in Semi Desertic Bechuanaland

By Mr. Michael P. Stuart Irwin

Received 29th December, 1955

The notes that follow were made in Northern Bechuanaland, Ngamiland and the western Kalahari during the C. S. Barlow Expedition of the National Museum of Southern Rhodesia in September and October 1954, whose primary object was the collection of Ornithological material.

All observations were made at pans, wells, or water holes, usually close to camp; localities at which these were made are as follows: The Nata River and the Makarikari Pan at its junction with the Nata, Mumpswe, 15 miles west of Nata; Odiakwe and Bushmans Pits on the main Nata-Maun road; Lake Ngami, then rapidly filling and a vast expanse of water; the Ghanzi district; and finally the isolated Tsodilo Hills, 35 miles west of the Okavango delta at Sepopa.

Notes made concerned mostly the smaller Passerines, observations on large birds such as Bustards being difficult. Sandgrouse, whose drinking behaviour is so well known are not discussed.

The ability to subsist without drinking must have a strong bearing upon bird distribution in arid areas and a major factor in limiting the dispersal of those forms which depend on a regular water supply. Graniverous species seem most dependant upon a regular supply, but insufficient is known of the types of food taken. It is significant, however, that most small insect eating Passerines are able to subsist without taking moisture, though the Hirundines as a whole seem to be an exception, and to Swifts, also aerial plankton feeders the same would seem to apply.

No members of the following Passerine families were seen at water:- *Timaliidae*, *Muscicapidae*, *Turdidae*†, *Sylviidae*, *Zosteropidae*, *Prionopidae*, *Dicruridae*, *Paridae*, *Laniidae* and *Nectariniidae*.

In the list that follows, species marked with an asterisk were trapped by means of using water as bait.

Numididae.

Guineafowl, *Numida mitrata* though undoubtedly able to exist without water over long periods, drink when it is available. At Ghanzi, Guineafowl coming to drink at a well, were prevented from doing so through our presence and roosted for two successive nights in the vicinity, on each occasion having had to go without.

Columbidae.

In the Kalahari and adjacent arid Mopane areas *Streptopelia senegalensis* is widespread, watering regularly in the early mornings and again in the late evening, and on occasion must have to travel great distances. On the other hand *S. capicola* does not appear to occur away from the close proximity of permanent water.

Apodidae.

Migrant *Apus apus* were seen coming down to the Mumpswe pans; in Southern Rhodesia *Apus* spp. are frequent at water.

†*Turdus litsipsirupa* in the Ghanzi district is a possible exception.

Alaudidae.

Larks of the genus *Mirafra* seem quite independant of water, the four species observed being *M. africana*, *M. africanoides*, *M. apiata* and *M. sabota*. On the other hand, the Sparrow Larks, *Eremopterix leucotis* and *E. verticalis* drink at least twice a day; in the early morning and again in the evening, though at Mumpswe, *E. verticalis* and to a lesser extent *E. leucotis* came throughout the day. At this locality *Calandrella cinerea* came to drink in considerable numbers; this is of interest, as Meinertzhagen with his very wide experience, states in *Proc. Zool. Soc.* 121: 1951, p. 94 that he has never seen any lark of this genus at water. I have also observed it drinking on a number of occasions in Southern Rhodesia, so the habit must be regular in Southern Africa.

Motacillidae.

At Mumpswe, recently arrived *Motacilla flava* ssp., came regularly to the pans, often in company with loose flocks of *Anthus similis*. The pallid form of *A. novaezealandiae* that live around the saline Makarikari must drink its waters, though at Mumpswe they took fresh water. A darker form of this species was extremely abundant about Lake Ngami, and in the Ghanzi district were seen visiting a limestone spring in what was virtually waterless country.

Pycnonotidae.

Pycnonotus nigricans,* although it replaces *P. barbatus* in the dry country, is closely tied to the vicinity of surface water which it takes regularly, and is therefore very localised, but where water is present, it is sure to be found, even at the remote Tsodilo spring.

Hirundinidae.

Riparia paludicola arrived irregularly at the Mumpswe pans, drinking on the wing.

Sturnidae.

Lamprotornis nitens,* the only Glossy Starling of the Kalahari and the waterless country generally, is completely dependant on surface water and drinks regularly.

Ploceidae: *Plocepasserinae.*

Plocepasser mahali, though common and often in the vicinity of pans, was never observed to drink.

Sporopipinae.

Although very abundant, especially at Ghanzi, *Sporopipes squamifrons* seemed to be entirely independant of water.

Ploceinae.

Both *Ploceus velatus** and *Quelea quelea** drink regularly whereas *Anaplectes melanotus* at Nata, Odiakwe and the Tsodilo Hills was seemingly independent of water.

Estrildinae.

All Estrildines must apparently have water at regular intervals and at Bushmans Pits and the Ghanzi district visited the available water supply in large numbers and of the following species: *Estrilda angolensis**, *E. granatina** and *E. erythronotos**, and in the Ghanzi district alone, *Amadina erythrocephala*. At the pans at Mumpswe and Odiakwe, *Ortygospiza atricollis* was present in pairs or small flocks, coming to drink throughout the day.

Passeridae.

In the Ghanzi district *Passer diffusus** came continuously to drink throughout the day, the regularity of their arrival in flocks, sometimes several hundred strong, pointed to their having traversed great distances. On the other hand, *Passer iagoensis** appeared to live only in the immediate vicinity of water, and was even then uncommon, there not being more than a pair at a pan.

Fringillidae: *Fringillinae.*

Serinus flaviventris at Ghanzi and *S. atrogularis* at Odiakwe and Mumpswe came to drink at intervals in small flocks.

Emberizinae.

*Emberiza flaviventris** came to drink at all localities where observations were made.

Notes on *Anomalophrys superciliosus* (Reichenow) in West Africa with special reference to its nidification.

by Dr. William Serle

Exhibited at the December meeting of the B.O.C.

Dr. William Serle exhibited a series of Nigerian skins and eggs of *Anomalophrys superciliosus* including a juvenile and a nestling in down, and communicated the following remarks.

Anomalophrys superciliosus is a rather local and uncommon Plover of tropical Africa described in 1886 by Reichenow (Journ. Ornith. 1886. pp. 115–116) from Mpara on the western shore of Lake Tanganyika on the eastern Belgian Congo border. Since its discovery it has been reported from widely separated localities in Togoland, the Gold Coast, French Equatorial Africa, Uganda, Western Kenya, and the Belgian Congo.

From the recorded dates of its occurrence north and south of the equatorial forest, its regular biannual appearances within the Belgian Congo equatorial forest, and an examination of the state of moult and gonads of individual specimens, Chapin (Bds. of Belg. Congo, Vol. 2 p. 77) concluded that *Anomalophrys superciliosus* was a regular transequatorial migrant breeding in the northern savannas about January–April and spending the off-season in the southern savannas.

To date the only definite recorded evidence of breeding of *Anomalophrys superciliosus* is contained in a note by J. D. Clarke (Nigerian Field, 1936 pp. 129–130) who caught a young chick on 27th February in south east Ilorin Province, Northern Nigeria. In West Africa it has been recorded from several localities† in the savanna north of the forest from Krachi, 0° 5′ W on the Volta River in the west to Bozoum, 16° 22′ E in French Cameroons in the east. The dates all fall between December and July. The only forest locality in Rio del Rey, in the Cameroons mangrove area. The two birds obtained there were not in their normal habitat and they were probably on passage.

† For details see Cat. Bds. Brit. Mus. 1896, vol. 24, p. 156; Reichenow, Die Vogel Afrikas, 1900, vol. 1, p. 163; Reichenow, Journ. Ornith., 1902, vol. 50, p. 11; Hartert, Novit. Zool., 1915, vol. 22, p. 246; Grote, Journ. Ornith., 1925, vol. 73, p. 95; Heslop, Ibis, 1937, pp. 174-175; Marchant, Ibis, 1942, p. 149.

My observations on *Anomalophrys superciliosus* were made in Onitsha Province of Eastern Nigeria between February 1953 and Febrary 1955 with a break from October 1953 until January 1954. The earliest date of their arrival was 1st December, and the latest date of departure 8th June. In December birds were already in pairs. Eggs were laid in January or February. In May the breeding grounds were deserted and family parties united to form flocks of up to fifty strong. At this season they accumulated fat. In early June they left the area.

In December-January the savanna in Onitsha Province is swept by grass fires which leave the ground bare and charred and the trees and shrubs blackened and leafless. As soon as the fire has passed, the Plovers select their breeding places. If, as sometimes happens, the early fire clearings are small in extent the available breeding terrain is correspondingly restricted. Thus I have known three pairs of Plover breed within a radius of two hundred yards. The restriction arises I believe from necessity and not from any social tendency. It should be explained that the firing of the savanna proceeds spasmodically over a period of several weeks until almost all the grassland is burnt. The only safe place at this season for ground breeders such as Plovers, Coursers, and Larks, to lay their eggs is on ground already burnt.

Over a period of three breeding seasons eight nests with eggs were discovered, all between 21st January and 5th February. Observations were made at one nest situated a few yards from the window of an unoccupied house which served as a hide. The male and female took turns in incubation the change over being effected quickly and without ceremony in two or three seconds. The Plover was a restless brooder, frequently rising from the eggs, turning round, and settling again in a new position, frequently stretching out to pick some pebble off the ground to add to the collection on the periphery of the nest, and sometimes even leaving the nest for a few moments to retrieve some stone beyond the reach of its outstretched neck.

On the appearance of a human being, even at a great distance, the brooding bird quietly ran off the eggs and remained in the vicinity standing motionless or moving round unostentatiously, picking at the ground, feeding, or at least appearing to feed. This undemonstrative behaviour at the nest proved to be normal for the species. At times the birds left the vicinity entirely. Very occasionally birds with eggs behaved differently, calling shrilly, and flying round, or posing or running about with both wings drooped. Birds with small young also showed excitement, but at no time did they indulge in the really extravagant behaviour exhibited by many plover species at the nest.

In all cases the nest consisted of a shallow circular depression in the rather stony, red, lateritic ground. The surrounding terrain varied. In grass savanna it consisted of bare earth and stones and the charred stumps of grass tufts. In orchard bush savanna there were in addition scattered shrubs and trees, either black and leafless or just breaking into fresh leaf. The eggs lay half-buried in an accumulation of little red stones and pebbles and fragments of ant hill varying in size from a lentil to a split pea, and the same materials were heaped up peripherally to form a distinct ridge raised well above the level of the surrounding ground. The diameter of

the nests varied from 115 to 220 mm. and the depth at the centre was about 25 mm.

The eggs are pyriform and have a smooth lustreless surface. Whilst there is variation in the colour of the ground and markings all but one clutch are decidedly erythristic. The exceptional clutch has an olive-clay ground with blackish-brown and olive-brown primary and ashy secondary markings. The eggs of this clutch resemble those of a common variety of *Vanellus vanellus* (Linn.). In the remaining sets the ground ranges from creamy buff through warm buff to pinkish-brown, and the markings take the form of blackish, chocolate-brown, and red-brown blotches and spots with ashy or pale mauve shell marks. It is the well-distributed, often bold, richly coloured, clear-cut primary markings that impart character to the eggs. One egg of a clutch is sometimes paler in ground and markings and more sparsely marked than its fellows and in two instances this was ascertained to be the last egg laid. In a partially pigmented oviduct egg the ground was white tinged green.

The reddish colouration of the eggs matches the red soil on which they are laid. The classical example of erythrism in limicoline eggs, that of *Lobipluvia malabarica* (Boddaert) was described by Stuart Baker (Journ. Bomb. Nat. Hist. Soc. (1931) vol. 35 p. 250). In India *L. malabarica* usually lays erythristic eggs in a tract of country with red lateritic soil whilst in country with normal black soil the eggs have the usual dull ochre colour. The erythrism is generally regarded as adaptive.

As you will see from the series of eggs of *A. supciliosus* and *L. malabarica* there is a striking similarity between both the erythristic and the non-erythristic varieties of the two species†. In India erythrism is confined to the red lateritic strip of Travancore. In West Africa the geographical distribution of the erythrism has still to be worked out since eggs are known only from Onitsha Province. It will be observed that the Onitsha Province eggs are not exclusively erythristic. One clutch out of the eight was olive-clay coloured, and like the other clutches it was laid on red ground.

Measurements: Average of twenty-seven eggs 36.3 x 26.7: max. 40.5 x 26.8 and 36.8 x 28; min. 33.8 x 25.8 and 35.3 x 25.5 mm.

The incubation period of one clutch was at least twenty-four days. The nest contained four eggs when discovered on 21st January and two of the eggs hatched on 14th February. Incubation probably begins with the first egg laid, for differences in incubation in the eggs of a clutch are sometimes apparent on blowing. In five cases the clutch was four, in two cases three, and in one case two. Examination of the ovary of the parent of the clutch of two indicated that the clutch was a full one.

The young in down behave like Lapwings, usually squatting motionless, but capable of running at great speed. The dark patch on their occiput is a field mark.

Description of female nestling in down: Upperparts variegated buff and dark brown; dark patch on occiput; white patch on nape. Below—chin

† The *L. malabarica* sets are from the Stuart Baker collection and are exhibited with the kind permission of the Trustees of the British Museum. The birds themselves are strikingly similar in colour and colour pattern but the similarity may be more apparent than real for Sharpe placed them in different sub-families on the character of the scutellation of the tarsus.

and throat greyish white; breast and belly white; brown pectoral band. A full description is not possible because in places the fresh juvenile feathers are replacing the down. Iris brown; eye wattle creamy yellow and already well formed; bill blackish; feet fleshy brown. The diagnostic red chest feathers are just sprouting from their sheaths.

As was shown by dissection of ten stomachs the food of both adults and young consisted of insects. One adult had also taken grit.

Taxonomic Notes on *Cinnyris chloropygius* (Jardine)

by Dr. William Serle

Received 7th January, 1956

In *Cinnyris chloropygius* (Jardine) the only character useful for racial diagnosis is the colour of the belly in the adult male, and even this character is to be employed with caution because the colour of the belly changes as the brightly coloured feather tips are lost by wear and the duller feather bases are exposed. The differences in size over the whole range of the species are slight and the size transitions between different populations are gradual. The size, estimated in terms of wing and culmen length is greatest in the eastern and least in the western part of the range.

There is no difficulty in recognising the pale olive-bellied *C. c. kempi* Ogilvie-Grant, type locality Bo, Sierra Leone, and with this race I would place all examples from Sierra Leone, Liberia, Ivory Coast, Gold Coast, and south-western Nigeria.

Nor is there difficulty in recognising the dark-bellied *C.c. orphogaster* Reichenow, type locality Bukoba, Tanganyika Territory, and with this race I would place all examples from Uganda, south-western Sudan, Belgian Congo west to the Kasai, and north-east Angola.

The type of *C.c. chloropygius* is somewhat worn and has a dull olive belly. It is intermediate in colour between *kempi* and *orphogaster*. Its wing measures 45mm. The determination of the type locality of *chloropygius* is of some importance. "Niger River" is the locality given by Bannerman in the *Rev. Zool. Bot. Afr.*, 1921, p. 330. From a perusal of Allen and Thomson's *Narrative of the River Niger Expedition*, (1848), and of Jardine's remarks in *Ann. Mag. Nat. Hist. x*, p.188, 1842, I am of the opinion that the type, which was obtained by Dr. Stanger with Captain Trotter's party on the "Albert," almost certainly came from the Lower Niger, and most probably from Aboh.

Aboh, 5° 33′ N., 6° 32′ E. may therefore be designated as the restricted type locality.

With *C.c. chloropygius* I would place all examples from Nigeria east of the Niger, British and French Cameroons, Fernando Po, Gaboon, and north-west Angola. *C.c. luhderi* Reichenow, type locality Bipindi, French Cameroons, I believe to be a synonym of *chloropygius*. Reichenow surely could not have had the type of *chloropygius* for comparison when he described his *luhderi*, for the *chloropygius* type is easily separated from the Gold Coast birds with which he united it. (*Orn. Monats.* 1899, p.169).

Of the other described races, *C.c. ogilvie-granti* (Bannerman) and *C.c. insularis* Reichenow are regarded as synonyms of *chloropygius*, and *C.c.*

uellensis Reichenow as a synonym of *orphogaster*. I have seen no example of *C.c. bineschensis* Neumann type locality Binescho, south-western Abyssinia, said by its describer (*Orn. Monats.* 1903, p.185) to be darker on the belly than *orphogaster*.

A good series from the whole range, including the types of *C.c. kempi* and *C.c. chloropygius*, was examined at the British Museum. Appended are the wing and culmen measurements of 129 adult males grouped geographically.*

Nineteen from Sierra Leone.—Wing 45–48 (47); bill 16–17.

Five from Liberia and Ivory Coast.—Wing 45–48; bill 16–18.

Seventeen from Gold Coast and south-western Nigeria.—Wing 45–48 (47); bill 16–18.

Six from Eastern Nigeria.—Wing 46–48; bill 18–19.

Forty-eight from British and French Cameroons.—Wing 46–51 (49); bill 17–20 (18).

Four from Fernando Po.—Wing 47–50; bill 16–19.

Nine from Gaboon and north-western Angola.—Wing 48–53 (50); bill 17–18.

Twenty-one from north-eastern Angola, Belgian Congo, south-western Sudan, and Uganda.—Wing 50–54 (52); bill 17–19 mm.

On the Genus *Coracia* Brisson, 1760

by Monsieur Noël Mayaud

Received 29th December, 1955

The genus *Coracia* was described by Brisson in his "Ornithologia" T.I, p. 30, 1760, and the type species must be *Upupa pyrrhocorax* Linné as very clearly designated by Brisson himself T.II, p. 3 (by tautonimy) "Le Coracias *Coracia*" with the very adequate description of the species named by Linné *Upupa pyrrhocorax*. The coloured plate No. 38, fig. 1 is also a very good painting of that species (Atlas des Planches Enluminées de Brisson, par Martinet, in the Museum de Paris). It is in exactly the same manner that the type-designations as such Brisson's genera as *Aquila*, *Accipiter*, *Sula*, *Uria* etc. were made. Brisson's names of species, not always being binomial, are not accepted as such, but they can be used with the description to describe the type species. Brisson has designated quite rightly the type species of his genus *Coracia*, and it was Vieillot's opinion when he wrote in the 1st edition of Nouveau Dictionnaire d'Histoire Naturelle, an XI—1803, VI, p. 185: "Coracias. *Corvus graculus* Latham—Brisson en a fait un genre particulier qui ne diffère de celui du Corbeau qu'en ce que le Coracias a le bec un peu çourbé en arc . . ." (a good description of the Chough follows). Then Vieillot himself thought that the genus *Coracia* Brisson applied to the species named by Latham *Corvus graculus*= *Upupa pyrrhocorax* Linné. To apply the genus *Coracia* Brisson to the species *Melanoramphus* as done by Vieillot (1817) is contradicting the designation of the species made by Brisson (Ornithologia, II, p. 3–5, 1760) and Vieillot (1803, *ut supra*).

* These include forty-six skins in my own collection. All measurements are in millimetres. The brackets indicate mean figures.

A Final Word on the Nomenclature of the Himalayan Goldcrests

by Mr. H. G. Deignan

Received 2nd January, 1956

Since publication of my original note on this subject in the Bulletin (1954, vol. 74, pp. 103–104), the putative type specimen of *Regulus himalayensis* Bonaparte, 1856, has come to light in the collections of the British Museum and has been critically examined by Dr. Charles Vaurie and others, who have found that, as of the year 1955, it matches closely, in colouration, recent specimens from the northwestern Himalayas (Bulletin, 1955, vol. 75, pp. 99–100).

Vaurie's affirmation that Gould himself stated that his bird came from the northwestern Himalayas seems to derive solely from the author's enthusiasm for his argument, since reference to Gould's description leaves one with a strong impression that Gould had no real knowledge of his specimen's provenience. However, since the type is in existence and apparently belongs with the more western population, I am willing to accept Dr. Vaurie's correction.

His concluding paragraphs purporting to show that "we can . . . reject *himalayensis* Bonaparte altogether" and continue to use Jerdon's junior homonym demand more careful analysis. His citation of "1931, Report Eleventh Internatl. Congr. Zool., Padova, 1930, p. 87" cannot apply, since there is no ambiguity in the *fact* that a name of 1856 is older than a name of 1863, and accordingly no difference of opinion whatsoever. Reference to "the Conservation Principle adopted by the Fourteenth International Congress of Zoology at Copenhagen in 1953 (articles 27–29 and appendix 2 of the Decisions)" will show that "After considerable discussion, the Colloquium agreed, by a majority, to recommend the inclusion of a provision recognising the Principle of Conservation to a limited extent". In Appendix 2 appear four draft proposals to this end, but " it was unfortunately found impossible to secure agreement upon any of these drafts".

The phrase "to a limited extent" is, in my view, of highest importance. The Principle of Conservation was inspired by the awkward effects of certain nomenclatorial changes on such biological disciplines as parasitology, medicine, genetics, *et al.*, and in certain cases a cogent argument might be advanced for *nomina conservanda*. In the case of the Himalayan goldcrests, however, we are dealing with birds so rare and so seldom discussed that one may wonder whether as many as a dozen living biologists, all professional ornithologists, could have the *least* interest in their *subspecific* names, and of them only one or two could possibly see confusion in the admission that *himalayensis* Bonaparte, 1856, is an older name than *himalayensis* Jerdon, 1863.

For the benefit of those ornithologists who still adhere to the basic Article 25 of the International Rules of Zoological Nomenclature, I now restrict the type locality of *Regulus himalayensis* Bonaparte, Comptes Rendus Acad. Sci. (Paris), tome 42, No. 17, session of 28th April, 1856, p. 767 ("les monts Himalaya"), to Kotgarh in the Simla Hill States. As a result of this action, *Regulus Himalayensis* Jerdon, 1863, and *Regulus regulus salimalii* Deignan, 1954, will become its absolute synonyms.

Remarks on the Nidification of the Kenya Hill Chat *Pinarochroa sordida ernesti* Sharpe

by Capt. Charles R. S. Pitman

Received 19th January, 1956

There is one published record (Praed and Grant, ii, 1955, p. 307) of the nest and eggs of this race of *P. sordida* and those now to be described were collected by the well-known East African naturalist Raymond Hook whose knowledge of the wild life of Mount Kenya is unrivalled. Unfortunately, both eggs are fragmentary; they were taken on 6th September 1943 from a deserted nest found at 13,500 feet on Mount Kenya. One of the eggs measured approx. 23.0 x 16.5 mm. In colour pale blue and seemingly immaculate, there are a few almost imperceptible pale reddish or rufous secondary markings. The nest was in a cavity in a giant groundsel (*Senecio*), and Hook described it as "ordinary chat type of nest". The nest, sent to me, was rather large and untidy and *in situ* may have measured overall about 118 x 105 mm., with an overall depth of some 56 mm., the egg cup being about 68 mm. diameter and probably some 18 mm. deep. Composed mainly of very fine dead grass, forming a thick foundation, mixed with a few small pieces of green moss and some soft seed down, and thickly felted with lumps of what appeared to be woolly hyrax fur. In the lining were a few feathers, some of Mackinder's Owl *Bubo capensis mackinderi* Sharpe—it was Mackinder who also discovered this race of Hill Chat on Mount Kenya in 1899—and other white fluffy ones which may be of this owl, the Lammergeyer *Gypaëtus barbatus meridionalis* Keys. and Blas., or the Secretary Bird *Sagittarius serpentarius* Miller, one of the last named being seen not far from the nest site. It may sound a strange record for the plains loving Secretary Bird to be found at 13,500 feet, but I have also come across it at 10,000 feet in Kenya on the Cherangani Hills to the east of Mount Elgon.

On Two Large Examples of *Plautus alle* (L.) from Gt. Britain

by Mr. Alfred Hazelwood and Mr. Eric Gorton

Received 15th February, 1956

Among a series of *Plautus alle* (L.) picked up dead from the shores of Shetland and now in the Bolton Museum, there are two whose wing length is considerably in excess of the others.

Both are ♀♀ with measurements as follows

1. Lerwick, Shetland, 5–1–1954, wing (worn) 132 mm., bill 15 mm (this bird apparently first winter).
2. Lerwick, Shetland 19–1–1956, wing 135 mm., bill 15.5 mm.

The bills of both are more massive in appearance than in other examples and it seems reasonable to assign them to *P. a. polaris* (Stenhouse) hitherto unrecorded from Great Britain.

We are indebted to Mr. S. Bruce and Mrs. L. Gray of Lerwick for their kindness in sending us 'wrecked' specimens of this species from time to time.

South African Kite fishing

by Mr. J. H. Beesley

Received 15th February, 1956

In September 1955 my wife and I were watching a pair of Kites, *M. migrans parasitus* (Daudin), at Lake Chila, near Abercorn, Northern Rhodesia, which were flying low over the surface of the water. We then observed one of the birds drop down to skim the water, lunge with one foot and bring out a bream about 4 or 5 inches long and fly away with it to a tree.

I do not know whether the fish was a floating dead one, or a live one swimming near the surface.

Type-locality of *Francolinus schlegelii* Heuglin

by Rev. F. O. Cave

Received 24th February, 1956

In the Bull.B.O.C. 68, 1947, pp. 4–5 I gave my reasons why the Bongo River, the type-locality of *Francolinus schlegelii* should be considered as the Bussere River, probably about 15–20 miles upstream from its junction with the Jur River.

Having lived for the greater part of 1955 in that locality it struck me as odd that I should never have come across the species, and still odder that I could find no native who was acquainted with the bird. They did not recognise it from its picture, nor did the Ndogo name, ''Mbakpa'', mean anything to them. I therefore felt that the Bussere River could not be the type-locality.

von Heuglin, who first discovered *F. schlegelii*, was a member of Miss Tinné's party which arrived in the Bahr el Ghazal in 1863. von Heuglin's paper for the J.f.O. in which he described *F. schlegelii* is dated April 1863. This appears to be the only occasion on which he referred to the Bongo River; at all other times Bongo is referred to as a locality which seems to have been the locality of Biselli's seriba.

This seriba is that which was occupied by Miss Tinné and her party in 1863–64. An account of this expedition appears in ''Transactions of the Historic Society of Lancashire and Cheshire'' New Series Vol. IV 1864, pp. 107–148. The relevant pages are pp. 128, 139 and 141 in which there is a description of how the party arrived at Wau, which is clearly not the same place as the modern Wau, but was on the banks of the River Ghetti (or Bahr Wau), as shown on the map facing p. 128. Biselli's seriba is clearly shown west of this river.

The location of these places is confirmed by Schweinfurth in his ''Im Herzen von Africa'' 1874, in which he shows how he travelled north westwards from the modern Wau and crossed the River Ghetti, arriving at 'Biselli's subsidiary seriba' which he states is the same seriba where Miss Tinné's party had spent so long. The relevant pages in Schweinfurths book are pp. 350–355 in Vol. II.

Biselli's seriba was often referred to as Bongo, and von Heuglin was clearly there in April 1863. This seriba cannot now be identified either on the ground or on modern maps, but I place the type-locality of *F. schlegelii* as ''Bongo'', Lat. 7. 53 N. and Long. 27. 42 E.

It is clear that von Heuglin was never near the Bussere River which has been wrongly identified as the Bahr Bongo.

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Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1956

18th September, 16th October, 20th November, 18th December.

SEPARATES

Contributors who desire free copies of the Bulletin containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. As the proofs will be corrected by the Editor, it is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Committee have decided that in future the Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions up to 1,500 words on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

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Edited by
DR. JEFFERY HARRISON

- 1 OCT 1956
PURCHASED

BRITISH MUSEUM
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The five hundred and forty-ninth meeting was held at the Rembrandt Hotel, South Kensington, on Tuesday, 18th September, 1956, following a dinner at 6.30 p.m.

Chairman: MR. C. W. MACKWORTH-PRAED

Members present: 25; Guests 5; Total 30.

Mr. Mackworth-Praed opened his first meeting from the Chair by thanking the Club for doing him the honour of electing him Chairman.

The Late Mr. F. J. F. Barrington

The Chairman announced with deep regret the death of Mr. F. J. F. Barrington, M.S., F.R.C.S., a vice-chairman of the Club from 1943–45. Mr. Barrington has left the Club £1,000, duty free, in his Will. This most handsome legacy has almost doubled the finances of the Club. It is to be treated as capital and will be designated the "Barrington Fund," in order to perpetuate the name of our benefactor. The annual income from the "Barrington Fund" will be approximately £50.

Road Casualties in Birds

Mr. G. Finnis read a paper on this subject, describing his work to date on an inquiry he is undertaking. An interesting discussion took place and an account will appear in a subsequent BULLETIN.

An Albino Red-necked Grebe

Mr. B. L. Sage exhibited three photographs of an almost completely albinistic Red-necked Grebe, *Podiceps grisegena* (Boddaert). It was found exhausted in Switzerland in October 1955 and was photographed by Dr. A. Schifferli, before being released. This bird has been recorded in the *Ornithologische Beobachter*, vol. 53, pp. 47–8; 1956.

A Memorandum on the Name *Corvus monedula spermologus* Vieillot

by Dr. James M. Harrison, Capt. C. H. B. Grant and Mr. H. G. Deignan

Received 1st June, 1956

This note must be regarded as mainly historical, but it also seeks to remove any doubts concerning the nomenclatorial validity of the name *C.m. spermologus* for the western populations of *Corvus monedula* Linnaeus, and to establish it finally as the correct and proper name.

The problems and uncertainties involved are not new and have indeed been exhaustively investigated in two very informative communications by Noël Mayaud.[1, 2]

In order to comprehend the issues it is necessary to review briefly the nomenclatorial history of the name *C. spermologus*. Frisch,[3] in 1734 to 1763, figured a young Jackdaw in his Plate 68 and called it the "chouc". The representation given therein being undoubtedly an immature example of *C. monedula* Linneaus. This work, being non-binomial gave Vieillot the right to introduce the name "*spermologus*" properly into nomenclature in any way he so desired, and the date of its introduction into nomenclature was 1817.

At this early date a confusion arose concerning the distinction as species, between the "choucas", i.e. the adult of *Corvus monedula* and the "chouc" or immature of that species, and moreover it is to be noted that both Frisch and Vieillot used both these vernacular names. The error thus started, was perpetuated by the uncritical copying from author to author of vague descriptions, and by the persistent efforts, particularly by Vieillot to substantiate as distinct species the adult and young of *C. monedula*.

Briefly the chronological order of this chain of errors and misconceptions is as follows: in 1760 Brisson[4] copied Frisch, but the description he gave was that of Frisch's Plate and not that of Frisch's description—Brisson's so-called, "choucas noir". He also affirmed that the species was represented in Réaumur's private collection.

In 1817 Vieillot[5] copied from Brisson word for word, and as the controversy raged concerning the matter of two different species, i.e. the "choucas" (adult from Normandy, Paris and Lorraine), and the "chouc" (immature from the "southern provinces"), Vieillot, in order to strengthen his case insisted on a series of differences in size and structure between the two. Writing in 1823, Vieillot[6] remarks "Quoique Frisch, Brisson et Buffon aient presenté cet oiseau (i.e. the chouc) comme une espèce distincte de cet du choucas, les ornithologistes modernes le donnent pour une de ses varietés. Si comme nous, ils (i.e. the "ornithologistes modernes" avoient vu le chouc en nature qui est au museum d'histoire naturelle nous croyons qu'ils changeroient de sentiment." This seems to imply that Vieillot had seen a specimen of some kind in the Museum d'Histoire Naturelle, though it cannot be assumed that it was the specimen which now bears Wagler's label, nor indeed necessarily the one which the latter saw in 1827. This point we shall see is emphasized by Mayaud (loc. cit.). Further in the same communication Vieillot proceeds to detail a number

of differences of size and structure to substantiate his view that the "chouc" and "choucas" were different species.

It is at about this time that any suggestion of a possible Type of *C. spermologus* finds mention. However in 1840 Selys-Longchamps examined the specimen in the Museum d'Histoire Naturelle, and declared it to be an American *Corvus*, and from that date to the present time, we have had the absurd situation of an example of *Corvus ossifragus* Wilson masquerading as the Type of *Corvus monedula* Linnaeus of western Europe! The existence and identification of this specimen as *C.ossifragus*, in the Paris Museum, has been kindly confirmed for us by Professor Berlioz (*in litt.* 6.IX.54), bearing as it does the label "*Corvus spermologus* Wag. Typ. Vieillot." That such a fantastic state of affairs cannot be allowed to stand is obvious.

Mayaud,[2] (loc.cit.) writes: "Comme on ne pouvait savoir quil était le type de Brisson ni le type de Vieillot, mais qu'il y avait de grandes vraissemblances qu'il ne fut pas un choucas, et qu'au surplus Vieillot avait voulu décrire un oiseau autre que le choucas, j'avais rejeté la validité du nom *spermologus* pour le choucas, car il ne pouvait s'appliquer surement a un choucas et était le resultat de toute une serie d'erreurs."

In 1938–39, Kleiner[7] (Keve) revised the Jackdaws of the Palaearctic Region and upheld the name *C.m.spermologus* for the western populations of Europe, although using *C.m.turrium* (Brehm 1831) for the birds of central Europe. However, by most authorities *C.m.turrium* is placed as a synonym of *C.m.spermologus*.

Mayaud's researches, already referred to, have brought to light the confusion which existed earlier concerning the adult and young of *C.monedula* as distinct species, and this point needs little further emphasis except to stress, as already stated, that Frisch and Vieillot both referred to the "chouc" and "choucas". The former was undoubtedly referring to German Jackdaws, while Vieillot, although still endeavouring to maintain a specific difference between the "chouc" from southern France and the "choucas", referred to the "chouc" of Frisch and adopted *C.spermologus* from Frisch's work. He thus substantiated the identity of both his own and Frisch's "choucs" as Jackdaws beyond any shadow of doubt. His intention is further confirmed by his reference to Frisch' Plate 68, which is clearly that of a young Jackdaw. We may therefore categorically assert that both these authors were referring to Jackdaws, the one no doubt to German birds, the other, Vieillot, to birds from the south of France.

At the time when he published the *Inventaire des Oiseaux de France* (1936) Mayaud[8] was obviously not entirely at ease, since he used the name *C.m.turrium* (Brehm), reverting subsequently however to *C.m.spermologus* Vieillot in his *Liste des Oiseaux de France* (1953), which name that author now firmly, and quite correctly, upholds.

What remedies are open to us in resolving the age-long problem? Firstly, the so-called Type, labelled as it is "*Corvus spermologus* Wag. Typ. Vieillot", must be discarded as it cannot stand since it is not a European Jackdaw. Secondly, what evidence can we adduce to validate the name *C.m.spermologus*? Vieillot's description alone, as rightly pointed out by Mayaud, is in itself not sufficient. However, Vieillot purposefully and directly refers to Frisch's "chouc" and to Frisch's Plate 68, and this latter, as anyone can easily verify for himself, depicts a young Jackdaw.

It is our considered opinion that this fact alone so unquestionably supports Vieillot's description as to establish beyond dispute that *C.m. spermologus* is the correct name for the Jackdaws of France, with as a restricted type locality the Bordeaux district of France. This being the most southerly of the places named by Vieillot would, it is believed, be the best to select as the *Terra Typica*.

It has been suggested that the matter could be resolved by the collecting of a Neo-Type in the Bordeaux or Tours districts. However, it is not all authorities who recognize this practice, and it has been thought preferable therefore that our researches should seek to establish the name on the antecedent and relevant literature, and by reference to the original description and the references contained therein, to substantiate the validity of the name *Corvus monedula spermologus* Vieillot.

We would express our grateful appreciations for the help and co-operation received from Professor Berlioz and M. Noël Mayaud.

References:

[1] Mayaud, Noël, Notes et Remarques sur quelques Corvidae, *Alauda*, 1933, pp. 345–354.

[2] Mayaud, Noel, Sur la validité de l'appellation *Corvus spermologus* Vieillot. *Soc. Linn. de Lyon*, 1941, pp. 78–80.

[3] Frisch, J. L., *Vors. der Vög. Deutsch*, 1734–1763.

[4] Brisson, O. M. *Ornith.*, 2, 24, 1760.

[5] Vieillot, L. J. P., *Nouv. Dict. d'Hist. Nat.*, 1817, VIII, p. 40.

[6] Vieillot, L. J. P., *Tab. Ency. Meth. des Trois Regnès Natur.* Ornith. 2, 1823, p. 881.

[7] Kleiner, A. (Keve), The Jackdaws of the Palaearctic Region, *Bull. B.O.C.*, 1938–39, LX, p. 12.

[8] Mayaud, Noël, Heim de Balsac, H., Jouard, H., Inventaire des Oiseaux de France, *Soc. d'Etude Ornith.*, 1936, p. 100.

[9] Mayaud, Noël, Liste des Oiseaux de France, *Alauda*, 1933, I, p. 62.

The "First Reviser" and the name of the Philippine Pelican

by Captain C. H. B. Grant

Received 12th May, 1956

Dr. Amadon in *Bull. B.O.C.* 75, p. 21, 1955, desires to preserve *Pelecanus philippensis* Gmelin, for the Philippine Pelican, and has invoked the Copenhagen proposals to this end. I have suggested (*Bull. B.O.C.* 74, p. 85, 1954) that *Pelecanus roseus* Gmelin should be considered as indeterminate, as is intimated by Chapin and Amadon in *Ostrich*, p. 123, 1952. Gmelin's description is: Rosy Pelican, throat pouched, bill and feet black, around eye bare, pouch yellow; and of his *Pelecanus manillensis* is: Dusky Pelican, throat pouched, as pink as the neighbouring one, breeds on the ground, flesh rank. Sonnerat, *Voy. N. Guinea*, p. 91, states that the bird on pl. 53, is wholly brown, which is not so in young Philippine Pelicans, nor has the adult or young black bills and feet. The pouch is not yellow in the Philippine Pelican at any age, and Sonnerat's description of both his "Pelican brown" and "Pelican rose" gives the pouch as yellow, and so does Gmelin under his *P.roseus*. It appears certain that Gmelin based

his descriptions on Sonnerat and therefore Sonnerat's plates are the types.

I feel sure that if pls. 53 and 54 were submitted to ornithologists, without the captions or text, they would undoubtedly be considered as specifically unidentifiable. I think we should now agree that both *Pelecanus roseus* Gmelin, and *Pelecanus manillensis* Gmelin, be considered as indeterminate until such a time (if ever) Pelicans agreeing with Sonnerat's plates and descriptions and Gmelin's descriptions are known to occur in the Philippines.

Pelecanus philippensis Gmelin, *Syst. Nat.* 2, p. 571, 1789: Philippine Islands, based on Brisson, *Orn.* 6, p. 527, No. 3, plate 46, would be the next available valid scientific name. Brisson's plate 46 is an excellent figure of the Philippine Pelican, and was presumably drawn from a specimen in the collection of M. l'Abbé Aubry. In the event of this specimen being no longer in existence plate 46 in Brisson would be the type.

Dr. Amadon sees no reason why Roseate Pelicans (I presume he refers to *Pelecanus onocratatus* Linnaeus), could not occasionally wander to the Philippines. At present I believe there is no such record. therefore this can hardly be brought forward as an argument. Surely Bonaparte's action in placing the names in a different order to that given by Gmelin does not mean that he has revised these names.

Systematic ornithologists have agreed that the 1st January, 1758, is the starting date of binominal nomenclature, and if they adhere to that date there can be no such term as "nomina conservanda". An author who believes in "nomina conservanda" does not agree that 1st January, 1758, is the starting date of scientific nomenclature and an author who agrees with that date cannot believe in "nomina conservanda". Priority is adherence to this date and yet some still consider that they can adopt synonyms, when surely they must know that an earlier valid name is bound sooner or later to be adopted. When one valid scientific name is placed before another valid scientific name ("page and line priority") then the former has, without question or argument, been "first introduced". Because a name is well known and has been in "general use", is no excuse for not adopting an earlier valid name, and an "established name" is that scientific name first introduced properly into nomenclature after 1st January, 1758.

No systematic ornithologist takes a delight in changing scientific names, but unless 1st January, 1758, is strictly adhered to there is no hope that all ornithologists will be using the same specific or racial name, and only when all the earliest valid scientific names (generic, specific and racial) have come into general use can it be said that finality has been attained. Thanks to the researches of the many, there can be now only a few to discover, and when they are they should be adopted forthwith.

Systematic ornithologists are interested in, but not necessarily guided by, the nomenclatorial procedure of other branches of zoology, and certainly not the procedure in botany, and those who consider that the 1st January, 1758, is the starting date of ornithological nomenclature need need not heed, nor fear, the increasingly insistent clamour of other biologists.

Note—Other recent references to the name of the Philippine Pelican are Grant and Praed, *Bull. B.O.C.*, 58, p. 188, 1933, and Grant and Praed, *Bull. B.O.C.* 55, p. 63, 1934.

Breeding Tactics of the two Honey-Guides—*Indicator indicator* (Sparrman) and *Indicator minor* Stephens

by Mr. Hugh A. Roberts

Received 1st May, 1956

The Greater or Black-throated Honey-Guide, *Indicator indicator*, and the Lesser Honey-Guide, *Indicator minor*, are found commonly on Olifantsburg Farm in the Rustenburg District of the Transvaal, in South Africa. The Scaly-throated Honey-Guide, *Indicator variegatus* Lesson, also occurs but is rare. The first two seem to prefer the Black-collared Barbet, *Lybius torquatus* (Dumont) and the Pied Barbet, *Lybius leucomelas* (Bodd.) as hosts. More than once the nestlings of these hosts, evidently ejected by a young Honey-Guide, have been found on the ground below a Barbet's nest-hole.

In order to lay the eggs in the Barbet's nest both the Greater and Lesser Honey-Guides adopt aggressive tactics to get a pair of Barbets away from their nest site. After annoying the ♂ Barbet and tiring him out—a proceeding which takes at least an hour and may last for nearly two days—the Honey-Guide pair become very bold. Usually the ♀ Barbet remains in the entrance of the nest-hole throughout the initial baiting, but later is also drawn into the chase when the Honey-Guides fly around within a few feet of the nest hole. Then follows a mad rush by the ♀ Barbet, out of the hole and back again, this performance being repeated until she becomes rather exhausted. At this stage the ♀ Honey-Guide conceals herself nearby, and as soon as both Barbets pursue the increasingly bold ♂ Honey-Guide, the ♀ Honey-Guide makes a dash for the hole. Usually a short lull among the contestants now follows which enables the ♀ Honey-Guide to deposit her egg. Should the Barbets try and return too soon, the ♂ Honey-Guide at once takes action to lure them away.

No ♀ Honey-Guide has ever been seen carrying an egg. In the Rustenburg District the breeding season of these Barbets and Honey-Guides is from September to January.

On the Geographical Variation in Bill Size of *Parus afer* in Relation to Habitat

by Mr. Michael P. Stuart Irwin

Received 2nd December, 1955

Vincent, Check List of the Birds of South Africa, retained the use of *Parus afer parvirostris* Shelley, with type locality Salisbury, though it had correctly been placed in the synonymy of *P.a.griseveivetris* by Grant and Mackworth-Praed in Bull B.O.C. 63, 1942, p. 43, as the material available to me confirms; though the Grey Tit population inhabiting Mashonaland is isolated from those in Northern Rhodesia and Nyasaland, in being absent from the low-lying country of the Zambesi valley below 2,500ft., and from similar levels in the Sabi-Limpopo drainage.

In northern Mashonaland, as in Northern Rhodesia and Nyasaland, they are almost exclusively inhabitants of the better developed *Brachystegia*

woodland formations where the trees tend to form a canopy. Birds from this habitat have fine pointed bills with a culmen length of 11–12 mm. and a bill depth of 5–6 mm. Southward on the plateau, however, and out of the main heavy *Brachystegia* belt in the Umvuma and Gwelo areas of the Midlands, there is a quick transition from a thin to a heavy billed form, with culmen 12–14 mm., and a bill depth of 6–7.5 mm. These birds are wholly inhabitants of acacia thorn-veld woodland and in plumage characters are intermediate *P.a.griseiventris* ≷ *P.a.cinerascens*, which latter race entirely dominates in the thorn-veld areas of Matabeleland. The rapid change to the southward from *griseiventris* to *cinerascens* is apparently due to each race being specialized to a definite habitat, with little if any tendency to occur in areas that are ecologically unsuitable, and that well-developed *Brachystegia* is never found in direct proximity to thorn veld, the intermediate vegetation being either a more scrubby type of woodland that is unsuited to *griseiventris* or by a more park-like wooded grassland as in much of the Midlands, where these Tits are either very sparse or almost absent.

As series of these birds are remarkably constant from any given area, it is worth drawing attention to a single male from the Inyanga highlands, taken by the author from an association of *Acacia abyssinica* at 6,000ft. In colour characters it is intermediate *griseiventris* ≷ *cinerascens*, and in having a stout bill: culmen length 13 mm., depth 7 mm. This points to the possibility of their being a dark, heavy billed form in the Inyanga highlands and possibly elsewhere in the Eastern Districts, but at present no other material is available from there.

NOTE.—This note has been prepared with the help of the fine material from both the Rhodesias in the National Museum at Bulawayo.

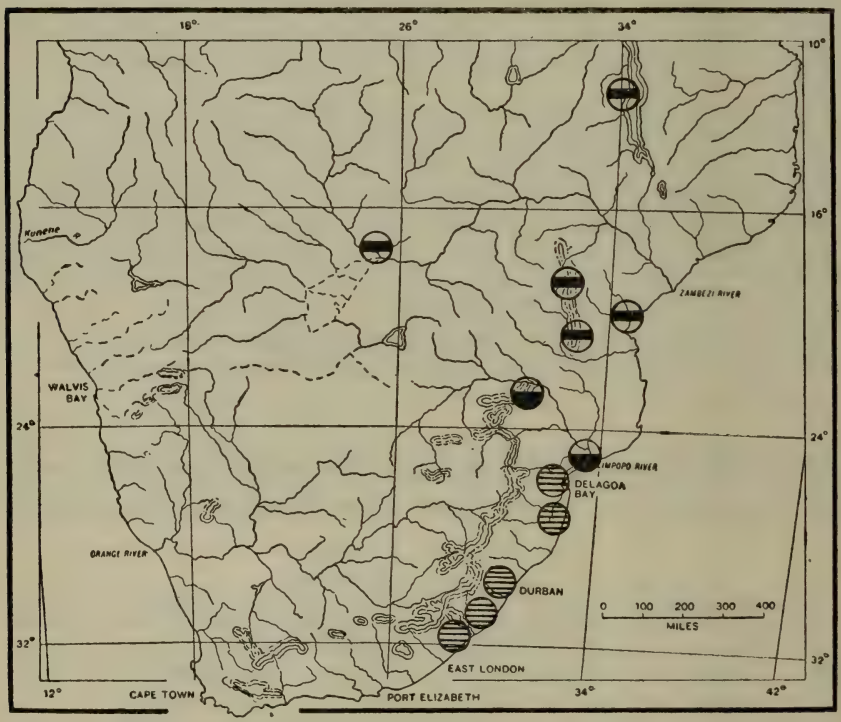
The South African Races of *Cossypha natalensis* Smith, with the Description of a new Race from Southern Mozambique

by MR. P. A. CLANCEY

Received 9th December, 1955

The Natal Robin-chat *Cossypha natalensis* Smith, 1840: Durban, Natal, a shy inhabitant of both lowland and highland evergreen forest and dense cover, ranges from the eastern districts of the Cape Province and Natal northwards in the east to Kenya Colony, southern Somalia, Uganda, south-western Abyssinia and the southern Sudan, and in the west to Angola, the Belgian Congo, French Equatorial Africa and the Cameroons. Despite its enormous range the amount of research material from any one locality available to workers is limited, due in part to the species' shyness and also to the fact that it has a very patchy distribution and is nowhere truly numerous. Mearns, *Smithsonian Miscellaneous Collections*, vol. lxi, No. 20, 1913, p. 2, working with very limited comparative material, described the races *C.n.intensa* Mearns from Taveta and *C.n.garguensis* Mearns from Mt. Gargues (Uraguess), Matthews Range, Kenya Colony, separating them from the nominate subspecies of the south on somewhat nebulous colour characters. Van Someren, writing in the *Novitates*

Zoologicae, vol. xxix, 1922, p. 239, states that no races are recognizable, while Friedmann, *Bulletin of the Museum of Comparative Zoölogy*, vol. lxxxi, No. 1, 1937, p. 251, synonymizes *C.n.intensa* with *C.n.natalensis* and suggests that *C.n.garguensis* may be valid, being paler and smaller. In a short paper in the *Durban Museum Novitates*, vol. iv, 1, 1952, pp. 14–17, I have shown that the tropical populations of the species differ significantly from those of the eastern Cape, Natal, Zululand, etc., in having the top of the head russet or cinnamon and not dark olivaceous brown, and that at least four races should perhaps be recognized. In this same paper a new race from Nyasaland, *C.n.hylophona* Clancey: Chinteche, was described. However, in spite of this work on the clearly demonstrable polytypic variation, the species is treated binominally in all recent standard works on birds of the Ethiopian region.



Map showing the localities from which specimens of the three southern races of the Natal Robin-chat *C.natalensis* have been examined.

Since studying this species in 1951 (report published in March, 1952) further material has become available from many parts of South Africa, and it is now possible for me to deal definitively with the question of geographical variation in the austral populations. Through the courteous co-operation of the Directors of the Transvaal Museum, Pretoria, the Natal Museum, Pietermaritzburg, and the Museu Dr. Alvaro de Castro,

Lourenço Marques, I have recently been able to assemble and study a series of over eighty specimens from south-eastern Africa. I find that individual variation is quite circumscribed and that three well-defined races of this robin-chat can be conveniently recognized from the South African sub-continent.

C.n.natalensis, based on a bird collected near Port Natal, *i.e.*, Durban, Natal, is quite numerous in its type-locality and throughout most of the coastal districts of Natal. Of the topotypical populations a good series of specimens is available for research purposes, and study of this material shows that Natal birds are richly coloured ventrally and have the head-top dark olivaceous brown. Other populations agreeing with those of Natal occur in coastal Pondoland to the south and in Zululand and extreme southern Portuguese East Africa (Lourenço Marques and Lebombo Mountains) to the north. The nominate race is constant within the geographical limits defined, the individual variation observed being restricted to slight differences in the intensity of the orange-russet of the ventral surfaces, while birds in abraded dress tend to be duller and less yellowish on the under-parts and paler on the crown than newly moulted examples.

To the north of the range of *C.n.natalensis*, in the sandy, flat savanna country of Portuguese East Africa and adjacent areas, occur interesting populations in which the under-parts of the birds are much duller and paler, less yellowish, and the dorsal surfaces lack much of the rich pigmentation of Natal topotypes. Such birds, however, resemble those of Natal in the dark colouration of their head-tops. Specimens showing such criteria have been examined from several localities in Sul do Save, southern Portuguese East Africa, and from Mariepskop in the eastern Transvaal. How far north the form ranges is not known at the present time, but breeding examples collected by P. A. Sheppard at Mzimbiti and Beira are referable to the red-headed populations to be discussed later in this communication. I am of the opinion that the pale coloured populations of southern Portuguese East Africa exhibit differences occasioned by their residence in a markedly different habitat and appreciably drier and less humid climate than those of Natal, and thereby warrant subspecific segregation. They are formally described as a new race, *C.n.egregior* mihi, below.

In the highland evergreen forests of eastern Mashonaland, Southern Rhodesia, and the adjacent highland districts of Portuguese East Africa occur birds which differ significantly from the two races already considered. In the colouration of the ventral surfaces they most closely resemble *C.n.natalensis*, but from both this race and *C.n.egregior* they are immediately separable by having the crown of the head russet or cinnamon, not dark olivaceous brown. These populations, as well as those of lower Zambesia, are referable to the race recently described from the highlands of Nyasaland as *C.n.hylophona*, the northern limits of the range of which are still not clear owing to the absence of comparative material from many parts of equatorial Africa. It is believed that *C.n.hylophona* represents the species throughout most of its central African range, being replaced in the coastal districts of Kenya Colony and adjacent areas by *C.n.intensa*, a race which differs from it in having a more robust and arched bill and in being more saturated ventrally. The status of *C.n.garguensis*, still only

known from the unique *Type*, can scarcely be discussed here in the continued absence of adequate material. It is described as being paler and smaller than *C.n.intensa* and *C.n.natalensis*, and is believed to be restricted to the Matthews Range in northern Kenya Colony.

The present monotypic treatment of *C.natalensis* is not in accordance with the scientific facts, and it is now believed that geographical variation is reasonably well developed in the species. Resulting from this study, three races can be conveniently recognized from within South Africa subcontinental limits. Further study and collecting of the more northerly populations are clearly required before an accurate assessment of the gamut of sub specific variation can be made. Certainly five, and perhaps even six, races will ultimately require to be acknowledged in our taxonomic arrangement of the species.

In the ensuing list of the South African races of *C.natalensis* I have defined the coronal and ventral colours of the forms concerned by means of the system perfected by C. and J. Villalobos, *Colour Atlas*, Buenos Aires, 1947, for the benefit of workers with limited comparative material. The nomenclature, characters and ranges of the three races are as follows:

1. *Cossypha natalensis natalensis* Smith

Cossypha natalensis Smith, *Illustrations of the Zoology of South Africa*, Aves, 1840, pl. lx (and text): near Port Natal, *i.e.* Durban, Natal, South Africa.

Top of head dark olivaceous brown (about 0–2–9°); nape and centre of mantle dull russet suffused olivaceous; rump similar; scapulars dark blue-grey. Whole of under surface rich orange-russet, darkest on breast and flanks (about 0–10–12°).

Wings ♂♂ 91–96, ♀♀ 84–93, bills (from skull) 17.5–20, tails ♂♂ 76–81, ♀♀ 69–77.5 mm.

(Fifty-six specimens examined)

Range: The coastal areas of Pondoland, eastern Cape Province, Natal and Zululand (mainly in the coastal districts), and the extreme south of Portuguese East Africa in the Lebombo Mountains and the adjacent littoral (Lourenço Marques).

2. *Cossypha natalensis egregior*, subsp.nov.

Similar to *C.n.natalensis* but duller and less richly coloured on the upper parts, and markedly paler and duller, less deep rich orange-russet, ventrally (about 0–10–10°). The throat is particularly pale.

Wings ♂♂ 90.5, 91.5, ♀♀ 83.5–88, bills (from skull) 18–20, tails ♂♂ 76.5, 77, ♀♀ 71.5–75 mm.

(Twelve specimens examined)

Type: ♂ adult. Near Manhiça, Sul do Save, southern Portuguese East Africa. Collected by the Durban Museum Expedition. 16 September, 1955. In the Durban Museum.

Range: Known only from Sul do Save, southern Portuguese East Africa, in areas immediately to the north of the range of the nominate race, and in adjacent districts of the eastern Transvaal (Mariepskop) and Southern Rhodesia. Found in thickets in park-like savanna country with a very sandy soil.

3. *Cossypha natalensis hylophona* Clancey

Cossypha natalensis hylophona Clancey, *Durban Museum Novitates*, vol. iv, 1, 1952, p. 15: Chinteche, Nyasaland.

Differs from *C.n.natalensis* and *C.n.egregior* in having the head-top russet or cinnamon (about 00S–5–10°), and in exhibiting brighter and more extensive areas of russet on the lower nape and centre of the back; rump and upper tail-coverts redder. Ventrally still more richly coloured than *C.n.natalensis* (about 0–9–12°).

Wings ♂♂ 92–95, ♀♀ 86.5–92.5, bills (from skull) 17–20, tails ♂♂ 72–81.5, ♀♀ 69–73.5 mm.

(Sixteen specimens examined)

Range: The highland evergreen forests of eastern Mashonaland, Southern Rhodesia, and adjacent highland districts of Portuguese East Africa (Macequece) and to the coast at Beira and Mzimbiti. Extralimitally in the highland evergreen forests of Nyasaland, northern Portuguese East Africa and southern Tanganyika Territory. The populations of this robin-chat occurring in Angola, French Equatorial Africa, the Cameroons, the Belgian Congo, the southern Sudan, south-western Abyssinia, etc., are closely allied to *C.n.hylophona*, but require further study to determine their correct relationship. Replaced in the Matthews Range, northern Kenya Colony, by *C.n.garguensis*, and in the coastal districts of East Africa by *C.n.intensa*.

NOTE.—The species is not generally recorded as occurring in Northern Rhodesia, but there is an adult ♂ collected by Wilde on the Machili River, south-western Northern Rhodesia, on 15th October, 1908, in the Transvaal Museum. This specimen resembles topotypes of *C.n.hylophona* but is rather paler on the upper-parts, the back and rump less reddish.

New Geographical Races of *Camaroptera fasciolata* and *Batis capensis* from Southern Rhodesia

by MR. REAY H. N. SMITHERS AND MISS MARY PATERSON

Received 26th March, 1956

Camaroptera fasciolata irwini new race

Description: Differs from *C.f.fasciolata* (Smith) in lacking the buff colour of the flanks and lower belly, being clear white on the under parts between the barring. The upper parts distinctively lighter and less russet than *C.f.fasciolata* and lacking the olive greyness of *C.f.buttoni* (White) and *C.f.stierlingi* (Reichenow). The upper tail coverts and tail distinctly less russet than *C.f.fasciolata*, being intermediate between this and *C.f.buttoni*.

Type: N.M. 20381, Male, 31.8.55, Central Estates, Umvuma, collected by M. P. Stuart Irwin. Taken in bushes and trees growing in rocks in open grass park-like woodland. ,

Distribution: The whole of Southern Rhodesia excluding the border area from Beit Bridge to Plumtree in the south-west and west where it is replaced by the nominate form.

Material examined: Besides the Type the National Museum has a series of 3 from Central Estates, Umvuma, 5 from West Nicholson, 2 from

Selukwe, 2 from Tjolotjo and 1 each from Buhera, Umtali, Bembezi, Kana River, Rutope River Sebungwe, Wankie, and 2 from Kasane, Bechuanaland Protectorate, adjacent to the Southern Rhodesian border in the extreme north-west.

Remarks: Material from Beit Bridge, Ingwesi Ranch Syringa, 60 miles south of Plumtree, is clearly typical as is a series from Francistown, B.P., 20 miles west of the Southern Rhodesian border. Named after Mr. M. P. Stuart Irwin of Salisbury, S.R.

Batis capensis kennedyi new race

Description: Generally greyer above, less olive brown than *B.c.erythropthalma* or *B.c.capensis*. The russet colour on the wing coverts and edges of the primaries, the under parts and the grey crown paler than in the other two forms; the black chest band of the male generally narrower. The wing of the males averaging longer 65.7 than *B.c.erythropthalma* 62.7. The females approximately the same at 62.5.

Occurring commonly with *B.molitor* in the well wooded slopes on the sides of granite kopjes in the Matopos area where they form an island population separated from *B.c.erythropthalma* of the Eastern Districts and adjacent areas by a wide belt of ecologically unsuitable country.

Types: Male N.M. 16016; Female N.M. 16012; Mchabezi Valley, Matopos. 20° 29′ S : 28° 46½′ E. 2nd May, 1954—Schools Exploration Society Expedition 1954.

Material examined: Sixteen specimens from the Type locality and adjacent areas.

Remarks: Named after Major-General Sir John Kennedy, former Governor of Southern Rhodesia, who drew attention to the presence of this species in the Matopos in two visual records made in 1950. (*Ostrich*, p. 158, December 1951).

Notes on African Larks—Part III

by Mr. C. M. N. White

Received 20th February, 1956

Mirafra africana Smith

I have already published some notes on the races of southern and central Africa in *Bull. B.O.C.* 64, pp. 20–21, 1943, and 65, pp. 48–49, 1945. Additional material since examined enables me to elaborate these notes in various ways. I am greatly indebted to Mr. R. H. Smithers for the loan of important material from the National Museum, Bulawayo.

M.a.africana Smith

This race represents the southern end of what now emerges as a cline ranging north to the Zambesi river and to a limited degree beyond. It is the largest and darkest population within the cline with wings 95–105 and bills from the skull 19–24 mm.

M.a.zuluensis (Roberts)

The study of further material convinces me that this race is much less satisfactory than was hitherto thought. It is in fact no more than an intergrade between *africana* and *transvaalensis* Hartert, differing from the former in being lighter and from the latter in being generally darker above

and overlapping in dimensions with *africana*. Wing 94–101, bill 18.5–22 mm.

M.a.transvaalensis Hartert

This name must be used for a complex of populations ranging from the Transvaal to Southern Rhodesia, the railway strip of Northern Rhodesia from Livingstone to Mazabuka and Lusaka and with isolated pockets in Nyasaland, northern Portuguese East Africa and south Tanganyika Territory. Benson has shown (*Ostrich* xxi, 1950, pp. 28–29) how birds from these areas cannot well be subdivided. Variation too slight for taxonomic recognition is as follows: Transvaal birds are redder above than many from Southern Rhodesia but Northern Rhodesia birds are again rather red. The populations from Namwera and Nyasaland and Unangu, northern Portuguese East Africa run small, wings 87–95 mm. against 91–99 in Southern and Northern Rhodesia. Clancey has recently named them *M.a.isolata*. The whole aggregate now listed under *transvaalensis* differ from *africana* in being lighter, redder or pinker above with less heavy dark streaking and lighter on the belly.

If it were felt that this treatment involves the combining of too many populations with different characters under a single name, two alternatives are possible. To restrict *transvaalensis* to the redder birds of the Transvaal, and call the rest *zuluensis* might be possible, since the colder and more grey brown birds of the more northern localities seem absent from the Transvaal. But red birds like the Transvaal population occur in Northern Rhodesia, and some red birds occur in southern Portuguese East Africa and Southern Rhodesia. Alternatively the birds from Nyasaland and south Tanganyika might be separated, leaving the intervening population as intermediate between it and *transvaalensis*. I prefer to keep all as *transvaalensis* at present.

M.a.grisescens Sharpe

Lack of material from the type locality on the border of Southern Rhodesia and Bechuanaland has prevented a satisfactory assessment of this race. I have now seen birds from Wankie Game Reserve and the type locality. They are paler above than *transvaalensis*, especially due to a loss of the red pigments, giving a colder greyer or more frosted appearance. These pale birds extend over northern Bechuanaland in populations too ill-defined to warrant taxonomic recognition. The topotypical and Wankie birds are slightly redder and browner than Bechuanaland birds, and thus slightly influenced by geneflow from Southern Rhodesian *transvaalensis*. Birds from south of Kachikau to Makarikari are the palest of the series before me. Ngamiland birds appear rather dark above due to heavier blacker feather centres. It is, however, inadvisable on the material before me to recognize *ngamiensis* (Roberts). In south-west Barotseland (Senanga, Nangweshi) there are indications of more definite change. Birds from these areas are less frosted above, the mantle being more markedly pink, and the head top darker rufous. Beneath they are washed with pale rusty which contrasts with the very white bellies of Bechuanaland birds; but here again topotypical *grisescens* show more rusty below than the birds from Bechuanaland. On the whole I prefer not to name them in spite of the differences. Both *transvaalensis* and *grisescens* are made up of variable populations and uniformity of taxonomic treatment is necessary to avoid inconsistency.

M.a.ghanziensis (Roberts)

I formerly doubted the validity of this form, but am now satisfied that in western Bechuanaland from Ghanzi to Fort Rietfontein is a very pale pinkish race with reduced dark markings above which should be kept separate.

M.a.pallida Sharpe

The distribution of this race appears to be much wider than was formerly supposed; I have now seen specimens from Franzfontein and Kuruman which agree with the bird at Elephant Vlei. I now believe that *M.a.okahandjae* White, described by me in 1945 (*Bull. B.O.C.*, 65, p. 48) must be regarded as a synonym of *pallida*.

M.a.kabalii White

Further examination of the specimens in the British Museum collected by Lynes on the Kasai in north-east Angola shows that they agree closely with this race to which they should be referred. An example collected further north at Petianga in the Belgian Congo is apparently closer to *M.a.malbranti* Chapin.

M.a.tropicalis Hartert

Opinion differs as to whether *M.a.ruwenzoria* Kinnear can be kept separate from *tropicalis*. I have examined two series, at Tervuren and in the British Museum (Natural History). The supposed difference in the colour of the abdomen is inconstant and not very reliable but a proportion of *ruwenzoria* can be recognized by the greater development of black on the upper side. The series at Tervuren happens to support *ruwenzoria* much better than that in the British Museum, and it is noteworthy that two equally good series of a number of larks studied in two different museums often give quite contradictory pictures of variability. The recognition of *ruwenzoria* is a border line case. Many subspecies are commonly kept up on equally unstable characters, and if I had seen only the Tervuren series I should uphold it without doubt. As it is not so well marked in another good series, my inclination is to regard *tropicalis* in wide terms as I have done above with more southern populations of this lark, and not keep *ruwenzoria* separate.

M.a.sharpei Elliot

This red lark of British Somaliland has always been given specific rank, but careful examination of the specimens in the British Museum convinces me that it is merely a red race of *M.africana* which has lost most of its black pigment. In other respects the agreement is close as in head and face pattern, structure of bill, nostrils and wing, including the slight indentation of the inner web of some primaries, and markings on inner secondaries. A parallel situation is found in the red Somaliland race of *M.africanoides*, and I can see no further justification to maintain *sharpei* as a separate species.

The Mirafra africana species group

Mirafra africana is no doubt an old species for it has spread from the Cape Province to British Somaliland, Darfur and French Guinea with many rather striking discontinuities in its distribution. Populations in British Somaliland, Darfur, Northern Nigeria and French Guinea are all apparently very isolated from each other; there is other evidence of broken distribution in Central Africa. Yet these isolated populations are not very strikingly different from each other, and it seems likely that this large lark

has occupied certain areas more than once and given rise to a species group including several derivatives which are now too distinct to rank as subspecies, and since not wholly allopatric cannot be imagined as a superspecies. The following are the species which I regard as very closely related to *M.africana*.

(a) *M.hypermetra* (Reichenow)

This large lark of north-east Africa is largely allopatric to *M.africana*; it evidently overlaps the same region as *M.africana* inhabits in parts of Kenya and north Tanganyika but it is doubtful if the two ever live quite side by side and there is no evidence of intergradation. Specimens of *M.hypermetra* and *M.africana* in the Natural History Museum both labelled as Loliondo, North Tanganyika, were collected in very different country; *M.hypermetra* is low dry country in the Rift valley, *M.africana* considerably higher. Macdonald in describing *M.h.kidepoensis* (*Bull. B.O.C.* 60, 1940, p. 59) assigned to it two birds from Maroto and the Nakwai hills in north Uganda, and suggested that tail length was important in distinguishing *M.hypermetra* and *M.africana*. *M.a.tropicalis* and *M.a.athi* do not normally exceed 66 mm. in tail length; the tail in three *M.h.kidepoensis* is 74–81 mm. But the gap is bridged: *M.a.sharpei* from British Somaliland has a tail 65–73 mm.; the birds from north Uganda have tails 70–72 mm. In my opinion these birds from north Uganda are an undescribed race of *M.africana* which I refrain from naming until more material from surrounding areas of East Africa is available. They differ from *M.hypermetra* in colour, and apart from size, their pattern and colour seems to indicate clearly their relationship to *M.africana*.

(b) *M.somalica* (Witherby)

This lark has always been known as *Certhilauda somalica*; its long bill in the males recalls *Certhilauda*, but there the resemblance ends. The female has a smaller bill, little different to *M.a.sharpei*. The patterns of the wings, tail, and inner secondaries with their concentric lines of colour are wholly unlike *Certhilauda* and indicate a close relationship to *M.hypermetra*. Such scanty evidence as exists indicates that *M.somalica* occupies lower altitudes in Somalia than *M.a.sharpei*. In my view all the evidence suggests that British Somaliland has had a double invasion by larks of the *africana* group. *M.somalica* is a derivative of *M.hypermetra* and has not only acquired a foxy colour characteristic of many Somali larks, but has also evolved a more *Certhilauda*-like bill, but its pattern has been retained sufficiently to show its real affinities. The similarity between females of *M.somalica* and *M.a.sharpei* is very remarkable.

(c) *M.angolensis* Bocage

This lark is allopatric to *M.africana* in the highlands of Angola but the two occur very close to each other at Mwinilunga in Northern Rhodesia and in the Katanga, and possibly live side by side over a small area. I have not actually collected the two together. Despite its distinctive pattern which bears a superficial resemblance above to *M.apiata*, I find *M.angolensis* in the field quite unlike a Clapper Lark and very like *M.africana*. Males of *M.angolensis* often have longer and more attenuated bills than females and so exhibit some approach to the characters of a *Certhilauda*. I believe *M.angolensis* is best regarded as an offshoot of the *M.africana* group.

(d) *M.chuana* (Smith)

This lark has often been placed in a monotypic genus *Heterocorys*; Meinertzhagen placed it in *Certhilauda*. Actually it offers a close resemblance to *M.africana*, differing in its rather slenderer bill and loss of red on the flight feathers. It is not known whether it is wholly allopatric to *M.a.transvaalensis* Hartert, but may overlap with it in the west Transvaal. Field studies of the two in this area are greatly needed. *M.chuana* should be placed near to *M.africana* in taxonomy.

An arrangement of the African species of *Mirafra*.

Group A: "finch-like"
- *M.javanica* (3 races)
  - *cordofanica*
  - *williamsi*
  - *cheniana*
  - *albicauda* (2 races)

} superspecies

Group B: "africana assemblage"
- *M.hypermetra* (4 races)
  - *somalica*
  - *africana* (about 20 races)
  - *chuana*
  - *angolensis*

Group C: "clappers"
- *M.apiata* (8 races)
- *rufocinnamomea* (14 races)

} probably superspecies

Group D
- *M.africanoides* (13 races)

Group E
- *M.collaris*

Group F: "tree-perching group"

M.rufa (3 races)
- *gilletti*
- *poecilosterna* (2 races)
- *sabota* (10 races)

Group G: "Thrush-like, migratory"
- *M.nigricans* (includes *erythropygia* as a subspecies)

Group H "*Heteromirafra*", possibly worth generic rank
- *M.ruddi*

On the type locality of *Lybius bidentatus* (Shaw)

by Captain C. H. B. Grant and Mr. C. W. Mackworth-Praed

Received 9th December, 1955

Shaw, and all other authors, have given Barbary as the type locality of this species and we cannot find that any author has suggested a better locality. Barbary is confined to the northern part of Africa, west of Egypt to the Atlantic and north of the Sahara. This species' most northern limit today would appear to be northern Nigeria and it may have been taken to north Africa by the old trade routes either alive or as a skin. As it is now known not to occur anywhere north of Nigeria we would propose Northern Nigeria as the type locality.

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DINNERS AND MEETINGS FOR 1956

16th October, 20th November, 18th December.

SEPARATES

Contributors who desire free copies of the Bulletin containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. As the proofs will be corrected by the Editor, it is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Committee have decided that in future the Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions up to 1,500 words on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

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The five hundred and fiftieth meeting was held at the Rembrandt Hotel, South Kensington, on Tuesday, 16th October, 1956, following a dinner at 6.30 p.m.

Chairman: Mr. C. W. Mackworth-Praed.

Guests of the Club: Mr. and Mrs. Rupert Darnton. Members: 42; Guests: 27; Total: 71.

From Flamingos to Hippos

Mrs. Iris Darnton showed her latest colour film taken in East Africa. In a wealth of magnificent shots it is difficult to pick out the most outstanding. The opening sequences of the Lesser Flamingos were superb, as were the pictures of the Crowned Crane at the nest and with young. Those of the Red-billed Hornbill were the first ever taken showing some of the nesting habits, including the male feeding the female, while she was fully occupied walling in the young in the nesting hole with pure mud. Other memorable pictures included the Crimson-breasted Shrike at the nest and an amusing scene showing White-necked Ravens pulling at vultures' tails as they waited their turn to feed on a floating hippo corpse.

Captain Pitman described the films as exquisite, while the Chairman in closing the meeting admitted to being at a loss for words adequate to the occasion. The films, he said, were fantastic.

An Unusual Plumage Variation in the Wigeon, *Anas penelope* Linnaeus

by Dr. James M. Harrison and Dr. Jeffery G. Harrison

Received 31st March, 1956

In previous communications [1, 2, 3], we have called attention to some unusual plumages in the *Anatidae* and to the significance of some variations of pattern in birds. Amongst these we have recorded as one type of variation, the spotting of the undersides, a condition found in *Anas platyrhynchos* Linnaeus, *Anas crecca crecca* Linnaeus, and now the subject of this communication, *Anas penelope* Linnaeus.

We hold the view that this unusual spotting represents a reversionary

expression, and that in all probability the primitive *Anatidae* were heavily and generally spotted or streaked on the undersides.

One of us (J.G.H.)[4] has discussed at length the breast spotting in *Anas platyrhynchos*, examining the position as to whether such individuals should be regarded as genuine immigrants when found in the British Isles (i.e. in this case *A.p.conboscas*) or as mutations. An analysis of this character in Mallard from east to west revealed a ratio cline of from zero in India to 100 per cent in Greenland and 83 per cent in Iceland, an instance quoted by Huxley [5] of his "morphic cline."

The fact that in the two other species mentioned—the Teal and Wigeon, the breast and flank spotting is of far less regular occurrence suggests that this character, when it is present, has probably a deeper significance. Breast spotting is of course a normal character in *A.c.crecca* and *A.c. carolinensis*, although flank and breast spotting below the normal breast-shield level, as described by J. M. H. in *A.c.crecca*, is most unusual.

The Wigeon is regarded as a monotypic species and breast spotting is found nowhere in its range as a recognized and normal character in any plumage stage, so that the variation cannot be regarded as clinal, as was found to be the case with this character in *Anas platyrhynchos*, but is due to an autophoric reverse mutation towards a primitive plumage condition in the *Anatidae*.

The present specimen is an adult drake and was shot by J. G. H. in the Medway Estuary, Kent, on December 17th, 1955. The breast spotting can be seen on the accompanying plate, in comparison with a normal drake Wigeon. The breast spotting extends on to the flanks to some extent, a fact that would also seem to determine the character as of evolutionary significance.

(*See page 133 for plate*).

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[1] Harrison, James M. "Exhibition of Varieties of the Teal," *Bull.B.O.C.*, Vol. 66, p. 24, 1945.

[2] Harrison, James M. "On the Significance of Variations of Pattern in Birds," *Bull.B.O.C.*, Vol. 73, pp. 37–40, 1953.

[3] Harrison Jeffery G. "The Races of the Mallard," *Bull.B.O.C.*, Vol 64, p. 58, 1944.

[4] Harrison, Jeffery G. "An Undescribed Plumage Variation of the Drake Mallard," *British Birds*, Vol. XLII, p. 123–124, 1949.

[5] Huxley, Julian S. "Morphism in Birds," *Acta XI Congr.Inter.Orn.*, p. 317, 1954.

Notes on a Skull of the Genus *Bulweria* from St. Helena

by Dr. W. R. P. Bourne

Received 23rd March, 1956

At the time of its discovery in 1502 the island of St. Helena was heavily forested and formed one of the main breeding stations for the pelagic sea-birds of the subtropical eastern South Atlantic. It seems probable that the original sea-bird community of the island once included some or all of the tropical Boobies, Terns, Tropic-birds, and Frigate-birds still found at Ascension and South Trinidade to the north and west, and also several petrels, which may have included some of the subtropical species now found at Tristan da Cunha further south, but the forests and the main

sea-bird colonies were all destroyed soon after the island was colonised, and the only sea-birds known to breed at the present day are such relatively small and unobtrusive species as the Red-billed Tropic-bird *Phaethon aethereus*, the Madeiran Storm-petrel *Oceanodroma castro*, and the tropical Terns *Sterna fuscata*, *Anous stolidus*, *Anous minutus*, and *Gygis alba* (Murphy, *Oceanic Birds of South America*, 1936; Haydock, *Ostrich*, 25 : 62).

It seems probable that the larger petrels once nested in the floor of the original woods of the island, and beds of petrel bones mixed with the shells of extinct woodland molluscs are still found in the higher parts of the island, while the deposits of old guano around the shore were sufficiently extensive to be exploited for fertiliser during the nineteenth century (Hutchinson, *Bull. Amer. Nat. Hist.* 96, 1–554). A small shearwater of the *Puffinus baroli-lherminieri* group has previously been identified in these deposits (Lambrecht, *Handbuch der Palaeornothologie*, 1933; so far as I can discover these two species are osteologically indistinguishable); I have recently examined the petrel skeletons in the British Museum (Natural History), and the collection includes part of the skull of a second, larger petrel of the genus *Bulweria* collected on St. Helena together with the shells of molluscs by a Lieut. Turton. Since this is a discovery of some interest both in relation to the past avifauna of St. Helena and the zoogeography of the petrels as a whole I have made an attempt to identify the species, and it seems most likely to be the large subtropical race of the Soft-plumaged Petrel, *Bulweria mollis feae* (Salvadori), previously only known from the Cape Verde Islands and the deserts of Madeira.

I am indebted to Mr. J. D. Macdonald for permission to describe this skull and those of related species extracted from the skins for comparison, and to Mr. G. Cowles, who extracted the skulls from skins of *Bulweria mollis* and *Bulweria arminjoniana*.

THE SKULL

The skull consists of a complete cranium lacking the jaws. In its general structure and proportions it resembles the skulls of a number of morphologically similar medium-sized Gad-fly petrels of the genus *Bulweria*, including members of the "*hasitata*" species or super-species (*B.cervicalis* and *B.cahow*), *B.mollis*, *B.lugens*, *B.neglecta*, *B.arminjoniana*, and probably *B.inexpectata*, *B.alba*, and *B.ultima*, which I have not seen. It is slightly smaller than the skulls of *B.cervicalis* and *B.neglecta*, slightly larger than the skulls of *B.mollis* and *B.arminjoniana*, and very similar indeed to the skulls of *B.cahow* figured by Shelfeldt (*Ann. Carnegie Mus.* 13 : 333). It resembles *B.cahow* in being unusually heavily ossified, but since this is probably a character which is related more closely to the age and sex of the individual than the affinities of the species which has been directly responsible for the excellent preservation of the skull I do not attach much importance to it.

It would appear to be completely impossible to distinguish this skull from those of all possible related species. However, the majority of the Gad-fly Petrels are allopatric species which replace each other geographically in different climatic zones, so that it seems most likely that if the bird from St. Helena belongs to a known species it will be one of the two representatives of the group from the South Atlantic, subtropical *Bulweria*

mollis from Tristan da Cunha and the Cape Verde Islands, or tropical *Bulweria arminjoniana* from South Trinidade. I have therefore compared skulls extracted from typical South Atlantic skins of these two species with the cranium from St. Helena in an attempt to identify it. They are both somewhat smaller than the cranium from St. Helena, and resemble each other very closely indeed. However, the skull of *B.mollis* and the most closely related species *B.lugens*, *B.cervicalis*, and *B.cahow* has the posterior border of the inter-orbital septum partially ossified, forming a spur projecting downwards in front of the optic foramen, while *B.arminjoniana* and the most closely related species *B.neglecta* lack this spur, having the optic foramen completely open anteriorly. In the skull from St. Helena the spur is well developed; that fact that it is somewhat larger than the skull of typical *B.mollis* from the sub-antarctic convergence suggests that it must belong to the large subtropical race of that species, *feae* from the Cape Verde Islands.

The remote possibility that the skull may belong to *B.arminjoniana*, a member of the *B.hasitata* group, or an undiscovered species can only be excluded by the examination of a larger range of material or the discovery of a surviving colony of the birds in the cliffs of the island, and future visitors to the island would do well to investigate this situation.

ZOOGEOGRAPHY

Although St. Helena is surrounded by tropical surface water it lies to the lee of a cool current from the south and the belt of cool water welling up along the coast of South-west Africa. Thus it might be expected that in addition to the tropical species feeding around the island the marine avifauna might include subtropical forms feeding over the cooler waters to the south-east. Murphy (loc. cit.) remarks that a number of sub-antarctic sea-birds follow cool currents north to the vicinity of St. Helena, and such species as *Fulmarus glacialoides*, *Procellaria aequinoctialis*, *Procellaria cinerea*, *Bulweria macroptera*, and *Fregetta grallaria* have all been collected at least as far north as Ascension, but apart from old legends that Albatrosses used to nest at St. Helena none of these birds have been found nesting at either island. The present sea-bird community includes five pan-tropical species, but only one, *Oceanodroma castro*, which can be regarded as even marginally subtropical, because it frequents the cooler eastern parts of tropical seas, breeding north to temperate Japan and Madeira. *Bulweria mollis feae* is a subtropical form with a range very similar to *Oceanodroma castro* in the Atlantic, but the smaller typical race breeds in the subantarctic zone of the Southern Ocean, so that the discovery of the remains of what seems to be this species at St. Helena lends strength to the hypothesis that this island supported a mixed marine avifauna including subtropical species in the past.

The presence of a colony of subtropical sea-birds on St. Helena in the past will help to explain the peculiar bi-polar distribution of several subtropical petrels in the Atlantic at the present day. These birds, *Bulweria mollis*, *Puffinus baroli*, and *Pelagodroma marina*, all have very similar races breeding at Tristan da Cunha and other stations near the subtropical convergence of the Southern Hemisphere, and the Cape Verde Islands and the Salvages or Madeira in the north, although they avoid the true tropics entirely. Bones which may belong to two of them, *Bulweria mollis* and

Puffinus baroli, have now been found at St. Helena, while the third, *Pelagodroma marina*, has been seen at sea in that area, so that it seems possible all three species may once have bred there; the large gap in their present distribution will be explained if it is supposed that the birds originally colonised St. Helena from the south by following cool currents northward, and then colonised the northern hemisphere across the equator from St. Helena, perhaps by following the line of cool water which crosses the equator along the divergence between the Equatorial and Guinea currents. The wide gap in the distribution of all three species at the present day will be explained if colonies on St. Helena have been exterminated by man in recent times.

APPENDIX: Details of Skulls Examined

SPECIES, RACE	LENGTH (external occipital protuberance fronto nasal suture)	WIDTH (Inter-zygomatic)	DEPTH (Lambda-occiptal condyle)	OSSIFICATION of posterior border of inter-orbital septum
Bulweria:				
m. macroptera	49	36	22	Complete
l. lessonii	49	36½	24	Complete
cervicalis	44	35	21	Incomplete
cahow	43	33	21	Incomplete
m. mollis	40	27½	20	Incomplete
Brevirostris	40	28	20	Incomplete
hypoleuca nigripennis	36	23	16½	Incomplete
n. neglecta	42	31	22	Absent
a. arminjoniana	39	29	19	Absent
bulwerii	28½	19	13	Absent
St. Helena ?sp	42½	30	20	Incomplete

A case of Congenital Muscular Hemiatrophy in a Barrow's Goldeneye

by Dr. Jeffery G. Harrison and Mr. Philip Wayre

Received 12th May, 1956

Twenty Barrow's Goldeneye ducklings, *Bucephala islandica* were hatched during July 1955 from eggs received from Iceland by Mr. Philip Wayre. At first all the ducklings appeared quite normal, but when they were about two weeks old, it was noticed that one of them was slightly lame. It is possible that the condition had been present previously, for in the earliest stage it could have been overlooked easily among a large number of ducklings.

The condition became steadily more pronounced and reached its peak when the bird was about six weeks old and thereafter the bird got no worse. It now preferred to remain on land, but if compelled to swim it became very lopsided indeed, the right leg being much higher in the water and hardly used at all. On land it was very lame, but could get about surprisingly well, taking the weight on the left leg all the time. It fed well and grew as well as any of the other ducklings. It would go down to the water to drink, but would only go in when frightened.

The bird was last handled when about four months old. It was found to be in comparatively good condition. It was eventually picked up dead on 24th January, 1956, but was now found to be wasted and the feathers on the left side of the breast were considerably worn, as if it had been resting excessively on that side rather than equally on both sides. The left foot was abnormally scaley on the underside and the claws were eroded on the outer two toes, while the centre toe was almost twice as long as its opposite number. The size of the bones of the leg and foot were the same on both sides. These changes in the foot were thought to be consistent with stimulation from overuse, leading to hyperkeratinisation.

When skinned, it was immediately apparent that the body was asymmetrical and that the right side was considerably more wasted than the left. All three pectoral muscles were involved and the muscles of the thigh and leg. The wing muscles were not comparable, as the bird had been pinioned on the left side. The bones and joints of the thighs and legs appeared normal and healthy.

The findings point to a primary failure in the development of the muscles of the right side of the body and from the very early onset of symptoms it would appear to be a congenital defect. The rare condition of Congenital Hemiatrophy in humans would appear to be somewhat similar.

At present we know little about the prevalence of congenital malformations of muscles in birds. In the wild state they are unlikely to live for long unless the lesion is small, and their chances of being examined are minimal. Dr. James M. Harrison[1] has recorded one such case in a Fieldfare, *Turdus pilaris* Linnaeus, in which he found a defect causing a large depression in the lower and medial half of the left pectoralis major muscle. From the complete lack of any reparative process, as would have followed injury or inflammation, the condition was considered to be congenital.

Reference

[1] Dr. James M. Harrison. "A Defect of Musculature in a Fieldfare," *Bull.B.O.C.*, Vol. 75, p. 31, 1955.

On some examples of Melanism in the Genus *Parus* Linnaeus

by Mr. Bryan L. Sage

Received 16th July, 1956

The occurrence of melanistic, or partially melanistic individuals within the species of the genus *Parus* is evidently a very rare event. Previously I was aware of only three such records, which are enumerated below. Quite recently, however, mainly through the good offices of Mr. I. J. Ferguson-Lees, I have received details of three further cases.

Great Tit *Parus major* Linnaeus

1. Carmunnock, Lanarkshire, Scotland. 16th October, 1942.

A female, underparts pale cream washed with black on the breast and flanks. General tone dark, crown lacking normal lustre (Clancey *antea* 63: 6).

2. Esher, Surrey. 1955.

During the early part of the year Mr. E. D. Boyland frequently saw a bird which had the cheeks and ear coverts sooty black, as were also those parts of the wings and tail that are normally white. The yellow areas were somewhat dingy, and the dorsal surface dull compared with normal birds.

3. Breamore, Hampshire. 11th April, 1956.

Aberrant Blue Tit, Lianymynech, Montgomeryshire.

One seen by Mr. F E Penrose had the whole head and neck "hooded" with black, which extended down the breast. No white was visible anywhere in the wings or tail. Back a dull dark grey; breast dusky green; bill and legs dark.

I am indebted to Mr. Edwin Cohen for additional details of this record.

BLUE TIT *Parus caeruleus* LINNAEUS

1. Oxfordshire. Date and exact locality ?

One shot in which all the feathers of the wings were more or less marked with large brown spots (*Zoologist* 1849: 2428–32).

2. Llanymynech, Montgomeryshire. 24th February–26th March, 1956.

This bird, recorded by Mr. J. H. Owen, is a particularly interesting case exhibiting as it does complete melanism coupled with a marked deformity of the bill. The body was preserved in spirit and I have been able to examine it in detail.

The bird is an adult and the whole plumage is strongly suffused with black pigment. The dorsal surface appearing darker than the ventral, due to the underlying normal pigmentation being darker. The usual yellow of the ventral surface is just visible through the black suffusion. There is no trace of white on the cheeks or wings. In my opinion this bird must have shown a tendency to melanism from the fledgeling period, and the condition became more pronounced with each successive moult.

The bill is deformed to an extent that must have made feeding virtually impossible (see fig. 1). The bird no doubt weakened steadily, which probably explains why it was ultimately found drowned in a shallow bowl of water from which a normally healthy bird would have had no difficulty in escaping. The upper mandible, which crosses over the lower on the right-hand side, is 15 mm. in length and tapers to a fine point. It is so strongly decurved that it almost forms a right angle. The lower mandible is about 8.5 mm. in length, slightly recurved, and has a blunt tip from which a piece appears to have been broken. Similar deformities have been recorded previously in this species (*British Birds* xliv: 350 and xlv: 402),

and analogous cases in the Great and Coal Tits (*ibid* xliv: 350, and *The Countryman* xxxviii: 238). The body of the bird under discussion was considerably emaciated, obviously due to its inability to feed itself properly during the final stages of development of the deformity, which probably commenced growing spontaneously only a short period before death occurred. In the case of the Great Tit mentioned above the deformity was observed to commence growing quite suddenly, but the bird was able to rid itself of the extra growth by vigorous rubbing before it proved fatal. It is, I think quite certain that in cases where the victim is unable to dispose of such growths by rubbing, etcetera, death from starvation must ultimately occur.

Coal Tit *Parus ater* Linnaeus

1. Worplesdon, Surrey. 1908.

P. F. Bunyard (*British Birds* i: 384) describes two melanistic birds that he saw. The general appearance was greyish-black; head, beak, feet and legs, back and wings, jet black; belly, breast, coverts, greyish-black; cheeks and occipital spot dark greyish-black and just perceptible.

A new Race of the Short-toed Lark from Hungary

by Dr. L. Horvath

Received 17th May, 1956

Calandrella brachydactyla hungarica subsp.nov.

Description: A conspicuously grey lark, not sandy-looking, like the nominate form. Whole upper parts light grey, broadly streaked dark grey, especially on the top of the head and the back; lores and superciliary stripe light grey; ear coverts dark grey; chin, throat, breast and belly light mouse grey, darker grey on upper breast; under tail coverts conspicuously light whitish grey in colour; on each side of the upper breast there is a dark grey patch; axillaries and under wing-coverts light grey, not white tinged with sandy-buff, as in the nominate race. The tail and wing feathers and the wing coverts have light grey inconspicuous edges.

Distribution: Only known from the alkali plain of the Hortobágy, in north-eastern Hungary.

Type: In the Hungarian National Museum of Natural History, Register Number: 56.4.1. An adult male collected 5 kilometres south of Nagyiván, Hungary, by Dr. L. Horváth, on 5th May, 1956. The type locality is 47° 30′ N., 20° 56′ E. Measurements: wing, 88.8 mm.; tail, 57.1 mm.; tarsus, 20.9 mm.; bill from skull, 13.2 mm.

Remarks: This race has been found on the alkali plain Kunkápolnás, in the south-west part of Hortobágy. A series of 12 males and 5 females was collected near Nagyiván from the 4th to the 8th of May, 1956, with the following measurements:

	male	*female*
wing	88.8–94.9 mm.	84.0–89.9 mm.
tail	57.0–61.8 mm.	52.8–57.1 mm.
tarsus	17.8–21.0 mm.	19.7–20.6 mm.
bill from skull	13.0–14.9 mm.	12.4–13.6 mm.

Two adult drake Wigeon showing (*left*) a normal bird and (*right*) the drake with a spotted breast.

(*see article on page 125*)

Downy young of *Aythya erythrophthalma:* male on left, female on right.

(*see article on page 140*)

Nesting of the Tanganyika Masked-Weaver

by Mr. D. F. Vesey-FitzGerald

Received 10th June, 1956

The Tanganyika Masked-weaver appears to be restricted in distribution to the south-western corner of Tanganyika, the type locality being Karema (Long: 30° 25′ E; Lat: 05° 50′ S.). The species was only known from a few specimens and little has been recorded of its habits (Pread and Grant, 1955). Recently this weaver has been found to be a common bird in the Rukwa Valley, where a series has been collected and the nests observed.

Chapin, (1954), places *reichardi* as a race of the Vitelline Masked-weaver, *Textor vitellinus*, and Benson, (1955), notes its resemblance to the Southern Masked-weaver, *T. velatus*. But the latter author after examining the Rukwa birds is satisfied that they are distinct, and so it seems worthwhile recording observations on this little known species.

Males in breeding dress and with testes enlarged have been collected is February and a nesting colony was found in April, so the breeding season can be taken to be during the latter part of the rains when the grass in seeding, which is the usual time for weavers to nest. The colony was composed of rather more than 30 nests which were situated in a tall stand of *Pennisetum purpureum*, Elephant grass, on the bank of a river flowing across a level plain of open grassland which was extensively flooded. The nests were situated at 5-8 feet up the grass stems to which they were attached at one point, usually along one side. The nest is retort-shaped,

Colony of *Textor reichardi* in stand of *Pennisetum purpureum*.

Nest of *Textor reichardi*, showing attachment to grass stem, the closely woven nature of the structure and the downwardly directed entrance.

11 x 13 cm. but there is no neck to it at all. The entrance is more or less semicircular, 4 x 3 cm. and faces downwards. The structure is strongly and compactly built, the material being closely woven, the walls thick, and the shape neatly rounded and very firm. The nest is composed of rather narrow (3 mm) strips of grass blades; these are green in new, unfinished nests, but fade to a brownish colour later. The inside is finished with stalks and panicles of fine grasses, and a few feathers form a lining.

When the colony was found, 24. iv. 56., most of the nests contained young; both male and female parents were at the colony. Eggs were found in two nests and they were of two types. In one there were three half-incubated eggs, which is probably the full clutch. These were very pale blue and thinly splashed with very pale purple-brown; in one of these eggs there was some spotting with the same colour at the big end. Measurements: 2.07 x 1.41; 2.10 x 1.43; 2.14 x 1.41 cm. The second nest contained one fresh egg, which was also pale blue but was heavily marked with small and scattered purple-brown blotches; 1.94 x 1.33 cm. Chapin (loc. cit.) mentions the same variation of the eggs.

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Mackworth-Praed, C. W., and Grant, C. H. B. (1955), *Birds of Eastern and North Eastern Africa*, Vol. 2. Longmans, Green & Co.

A new Golden-winged Sunbird from Kenya

by Mr. John G. Williams

Received 23rd June, 1956

On 25th June, 1955, during a brief visit to Mt. Uraguess at the southern end of the Mathews Range, Northern Frontier Province, Kenya Colony, I collected an adult female *Nectarinia reichenowi* which differed markedly from females of this species collected in other parts of Kenya and northern Tanganyika. It was a much smaller bird with a very strongly curved bill. Unfortunately I was unable to secure further specimens at the time of my visit, but in early October 1955 Mr. John Smart of the Kenya Forestry

Races of *Nectarinia reichenowi:* left to right, males, *N.r.reichenowi*, *N.r.shellyae*, *N.r.lathburyi;* females, *N.r.reichenowi*, *N.r.shellyae* and *N.r.lathburyi*.

Department kindly collected a further four similar specimens on Mt. Nyiro, immediately north of the Mathews Range. In addition to these five specimens Dr. H. Friedmann has kindly sent me on loan three Mt. Uraguess examples of this sunbird from the United States National Museum collection. Dr. Friedmann had already drawn attention to the small size of these specimens in his report on "Birds of Ethiopia and Kenya" (*Bull.* 153, pt. 2, U.S.Nat.Mus. 1937).

A comparison of this material with a large series of the nominate race collected throughout its range and with specimens of *N.r.shellyae*, kindly sent to me by Dr. A. Prigogine, left no doubt that the northern population

of the Golden-winged Sunbird inhabiting the Mathews Range and Mt. Nyiro represented a distinct new race.

I have pleasure in naming this new sunbird

Nectarinia reichenowi lathburyi

in honour of General Sir Gerald Lathbury, K.C.B., D.S.O., M.B.E., in recognition of his constant enthusiastic support of ornithological research in East Africa.

Holotype: Adult male in full breeding plumage, in United States National Museum collection, reg. no. 217741; locality, summit of Mt. Garguez (=Uraguess), Mathews Range, Northern Frontier Province, Kenya Colony; 0° 56′ N. 37° 24′ E.; altitude 7,100 feet; 27th August, 1911; collector, E. Heller, Rainey African Expedition, 1911.

Description of holotype: Differs from nominate *Nectarinia reichenowi* in its smaller size and more decurved bill. Metallic plumage, especially of breast, more highly shot with crimson than in any specimen of nominate *reichenowi* examined (40 specimens) with the exception of a single adult male from Nanyuki, Mt. Kenya, which matches the holotype in this respect.

Soft parts: Iris dark brown; bill and feet black.

Measurements of holotype: Wing 76; exposed culmen 26: tail 61; central rectrices 115 mm.

Allotype: Adult female, in United States National Museum collection, reg. no. 217740; locality, summit of Mt. Garguez (= Uraguess), Mathews Range, Northern Frontier Province, Kenya Colony; 0° 56′ N. 37° 24′ E.; altitude 7,100 feet; 25th August, 1911; collector E. Heller, Rainey African Expedition, 1911.

Description of allotype: Differs from nominate *Nectarinia reichenowi* in its smaller size and more decurved bill; upper parts slightly darker and underparts tinged deeper yellow than in nominate race.

Soft parts: Iris dark brown; bill and feet black.

Measurements of allotype: Wing 67; exposed culmen 24; tail 51 mm.

In addition to the characters enumerated in the descriptions of the holotype and allotype, males of *N.r.lathburyi* in full eclipse plumage differ from eclipse males of *N.r.reichenowi* (material of *N.r.shellyae* in this plumage not available) in being darker, dead black against blackish-brown, on the head and underparts. Only recently collected eclipse males of nominate *reichenowi* were used in this comparison.

Habits: Lathbury's Golden-winged Sunbird appears to be confined to the Mathews Range and Mt. Nyiro, Northern Frontier Province, Kenya Colony. During various expeditions to other mountains in the Northern Frontier Province I found no trace of this sunbird on either Mt. Marsabit or Mt. Kulal, although *Cinnyris mediocris*, which occurs alongside *N.r.lathburyi* on Mt. Nyiro, is not uncommon on Mt. Kulal.

The single female I collected on Mt. Uraguess was shot while feeding from flowers of *Loranthus* sp., an orange-flowered parasitic plant growing on an isolated tree in a mountain valley. On Mt. Nyiro Mr. John Smart and Mr. William Hale both inform me that the species is common in the larger open glades of the forest, where it feeds almost exclusively among the orange blossoms of a *Leonotis* shrub and a yellow-flowered *Crotolaria* bush which grows abundantly around the forest margin. Birds observed by Mr. Hale (who unfortunately collected no specimens) and those secured

by Mr. Smart had their heads heavily dusted with the bright orange pollen of these flowers.

My colleague, Mr. R. Carcasson, has kindly examined in detail the stomachs' contents of the five recently collected specimens and reports as follows:

Adult male, Mt. Nyiro: Many fragments Hymenoptera (flying ants); Jassidae (1 jassid); Coleoptera (various fragments, including *Lampyridae*); Lepidoptera (scales from wing); fragments of *Blattidae* and ? Diptera.

Adult male, Mt. Nyiro: Fragments of Coleoptera (*Chrysomelidae* and *Melolonthidae*); Ephemerid (1 mayfly); Diptera (*Ortalidae*); and 1 spider.

Adult male, Mt. Nyiro: Fragments of Diptera (including *Culicidae*, *Syrphidae* and *Muscidae*); Coleoptera; Orthoptera (*Acrididae* and *Blattidae* fragments); Lepidoptera (wing scales) and a few spiders' legs.

Adult female, Mt. Nyiro: Mainly fragments of Diptera (*Ortalidae*) and some Coleoptera (including *Chrysomelidae*).

Adult female, Mt. Uraguess: Fragments of several spiders and some Coleoptera (mainly *Chrysomelidae*). This specimen, when picked up after shooting, dripped a clear fluid from the bill, almost certainly nectar.

Breeding: The holotype collected on 27th August is in full breeding plumage and a second adult male collected on the same date is in moult to breeding plumage. However, there is no data on the labels of these specimens to indicate gonad condition. Two of the adult males collected by Mr. Smart on Mt. Nyiro on 11th October are in full eclipse plumage with small testes, but his third male, collected on the same date, is completing moult into breeding plumage and had testes 5 mm. long. The adult female collected by Mr. Smart in October and the female I collected on 25th June were not in breeding condition. From this inadequate data it seems likely that *N.r.lathburyi* has an extended breeding season with a possible peak period between February and April.

The races of Nectarinia reichenowi

In the course of the present study material of *Nectarinia reichenowi* from throughout its known range was assembled, which has enabled me to revise the status of the two previously described races of this sunbird.

Nectarinia reichenowi alinderi (Laubmann), *Anz.Orn.Ges.Bay.* i, no. 12, p. 127, 1928: Mt. Elgon. Through the kindness of Mr. John Fowler I have received topotypical specimens of this race. I find that these agree exactly in measurements, bill formation and colour with a topotypical series of the nominate race. I agree with Granvik's and Prigogine's findings that this race was founded on an immature or subadult bird. *N.r.alinderi* (Laubmann is therefore a synonym of *N.r.reichenowi* (Fischer).

Nectarinia reichenowi shellyae Prigogine, *Rev.Zool.Bot.Africaines*, vol. 46, p. 414, 1952: Lake Lungwe, highlands north-west of Lake Tanganyika, Belgian Congo. Dr. A. Prigogine has very kindly sent me specimens of this race. I find *N.r.shellyae* to be a well-defined race, characterised in both sexes by its less curved bill (fig. 1) and in the female by the contrast between the grey crown and nape and the dark olive mantle.

Nectarinia reichenowi is therefore separable into three well-marked geographical races (table 1):

N.r.reichenowi (Fischer), a large race with a strongly curved bill; crown colour in female not contrasting with colour of mantle. Range: Highlands of Kenya Colony (except Northern Frontier Province) west to Mt. Elgon

on Kenya/Uganda border, south to highlands of northern Tanganyika.

N.r.shellyae Prigogine, a large race with a moderately curved bill; crown colour in female contrasting with colour of mantle. Range: Confined to mountains north-west of Lake Tanganyika, Belgian Congo, at altitudes over 7,000 feet.

N.r.lathburyi, a small race with a shorter, very strongly curved bill; crown colour in female not contrasting with colour of mantle. Range: Confined to the Mathews Range and Mt. Nyiro in the Northern Frontier Province of Kenya Colony.

Acknowledgements

Without the kind assistance of many friends this paper would not have been written. I am especially indebted to Dr. A. Prigogine for his kindness in sending me specimens of *N.r.shellyae* from the Belgian Congo; Mr. John Fowler has taken great trouble to collect specimens for me on Mt. Elgon; Mr. and Mrs. John Start of Molo have sent me valuable specimens from the western Kenya Highlands; Mr. John Smart has collected examples of *N.r.lathburyi* on Mt. Nyiro, without which it would not have been possible to describe the new race; Dr. H. Friedmann has sent me on loan the Mt. Uraguess specimens in the United States National Museum; my entomological colleague, Mr. R. Carcasson, has taken great trouble in identifying the contents of several stomachs; Colonel M. Cowie, Director of Royal National Parks of Kenya, and his staff, especially Mr. G. Dalton and Mr. T. Adamson, have given me much encouragement and assistance in the field.

TABLE I

Measurements of adult *Nectarinia reicheonwi* in milimetres

Race	*Dimension*	*Sex*	*Number of specimens*	*Range*	*Mean: to nearest ½ mm*
N.r.reichenowi	wing	♂♂	40	79–86	82
		♀♀	15	68–73	70.5
	exposed culmen	♂♂	40	26–31	29
		♀♀	15	25–28	27.5
	tail	♂♂	40	61–72	65
		♀♀	15	50–57	53
	central rectrices	♂♂	40	118–144	130
N.r.shellyae	wing	♂♂	3	78–83.5	80
		♀♀	2	70	70
	exposed culmen	♂♂	3	30–32	31
		♀♀	2	28	28
	tail	♂♂	3	67–69.5	68.5
		♀♀	2	58–60	59
	central rectrices	♂♂	3	119–127	124
N.r.lathburyi	wing	♂♂	5	75–80	77
		♀♀	3	67–68	67.5
	exposed culmen	♂♂	5	25–26.5	25.5
		♀♀	3	22.5–24	23
	tail	♂♂	5	58–61	60
		♀♀	3	50–52	51
	central rectrices	♂♂	5	106–124	114

On the Downy Young of Aythya erythrophthalma

by Mr. John G. Williams

Received 23rd June, 1956

Although the African or Southern Pochard, *Aythya erythrophthalma* (Wied), is one of the commoner African ducks it would seem from a perusal of the literature that the plumage of the downy young has hitherto been unknown. Messrs. Mackworth-Praed and Grant, *African Handbook of Birds*, series 1, vol. 1, state "Nestling plumage unrecorded."

Recently while investigating the bird-life on the Tigoni dam near Limuru, Kenya Colony, in company with General Sir Gerald Lathbury and Mr. David Roberts, a female African Pochard and seven newly-hatched ducklings were encountered. The male pochard was also in attendance, following up in the wake of his brood. Upon the boat being manoeuvred towards them the ducklings scattered and escaped by diving, later disappearing into the shelter of a fringing reedbed. The adult birds flew a short distance away: there was no distraction display by either parent. Later in the day the female was flushed from her nest in a patch of weather-beaten grassy sudd and two downy young were collected. These, upon dissection, were found to be a male and female about forty-eight hours old.

Description of downy young of Aythya erythrophthalma

Male: Crown, nape, hind neck, mantle, back, rump, uropygial tuft, patch on side of chest, sides of thigh, flank patch above thigh and ill-defined patch on each side of the abdomen sepia-brown with a strong olivaceous tinge; a faint brown streak across the ear-coverts; forehead, sides of head, chin, throat and remainder of underparts pale sulphur-yellow; lores tinged chrome-yellow; wing-bar, small patches on either side of back (below wings) and small round patches above uropygial tuft pale greenish-yellow. (Fig. 1).

Soft parts: Iris pale grey; bill, including nail, pale pinkish-grey, merging to pinkish-white along edges of mandible and tip of nail, lower mandible pinkish-white; legs and feet dark olive-grey, front of tibis-tarsal joint and sides of tarsus dusky greenish-white, toes dark olive-grey bordered on each side by dusky greenish-white stripe. webs dark olive-grey, hind toe olive-grey with greenish-white web.

The female resembles the male, but has the lores pale sulphur-yellow, not tinged chrome-yellow.

Locality: Tigoni dam, near Limuru, eastern Highlands, Kenya Colony. 1° 08′ S. 36° 41′ E. 7,000 feet. 10th June, 1956.

Food: My colleague, Dr. Bernard Verdcourt, has kindly examined the stomachs' contents, upon which he reports as follows:

Male: 20 per cent insect fragments, including many aquatic Hemiptera, some Diptera and a few Hymenoptera (tiny ants). 80 per cent vegetable matter, including fragments of water-lily leaf, bladderwort stems and several unidentified seeds.

Female: 50 per cent insect fragments, including mainly aquatic Hemiptera, with a few Diptera and Hymenoptera (ants). 50 per cent vegetable matter, chiefly water-lily leaf and bladderwort fragments, seeds of Polygonum and some other unidentified seeds.

The ducklings were observed to feed only on the surface of the water,

among a rank growth of water-lilies at the edge of a reed-bed. They resorted to diving only as a means of escape when disturbed.

I am greatly indebted to my friend Mr. C. A. Spinage for the photograph which illustrates this paper.

(*See page 133 for plate*).

Are *Luscinia pectardens* (David and Oustalet) and *Luscinia obscura* (Berezowsky and Bianchi) colour phases of a single species?

by Mr. Derek Goodwin and Dr. Charles Vaurie

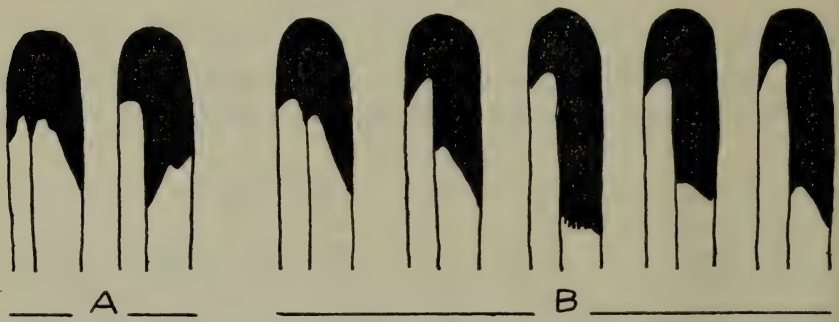
Received 12th May 1956

We believe that the specimens that we have examined strongly suggest this possibility. Further collecting and field observations on behaviour and ecology are required before this question can be settled, but, as these are not likely to be forthcoming in the predictable future, our evidence is presented here. The material studied consists of the specimens in the British Museum and the American Museum of Natural History.

These specimens are four adult males of *L. obscura*, Berezowsky and Bianchi 1891, collected for A. Owston during the breeding season on the Ta pai Shan of the Tsinling Range in Shensi, one on 30th May and the others on 14th July, 1905. Females, juvenile or first winter males, or males in non-breeding plumage of this form are unknown, or at least do not seem to have been recorded in the literature. The material of *L. pectardens* David and Oustalet 1877 consists of 24 specimens and includes adults of both sexes, juvenile and first winter males and adult males in non-breeding plumage. These were collected at all seasons—except during the pre-breeding season moult—in Burma, Yunnan, south-eastern Tibet, Sikang and Shensi. Only one specimen of *L. pectardens*, a fully adult male in breeding plumage, was obtained in Shensi but it is noteworthy that it was taken by the same collectors on 12th July at exactly the same locality as the four of *L. obscura*. Thus the two forms evidently occur together during the breeding season in Shensi, but only adult males in breeding plumage are known to us from this region. *L. obscura* was first obtained in Kansu, by Berezowsky and Bianchi (1891). They saw only four adult males, all in breeding plumage and all of which they obtained. They found some naked nestlings on the ground one evening and presumed, since they shot a male *L. obscura* nearby, that they belonged to this species. They failed, however, to find the nest, from which the young had fallen or been removed, or to see the female parent.

The plumage sequence of the male *L. pectardens* has been described (Goodwin 1956) but naturally no such study could be made in *L. obscura* because, as stated, the only specimens are adult males in breeding plumage. In this plumage the males of the two forms differ only through some sharply alternate characters in their coloration, namely: in *pectardens* the throat from the point of the chin to the level of the upper breast is orange whereas in *obscura* it is pure black; *pectardens* has a large white spot at the sides of the hind neck, lacking in *obscura* and its flanks and lower belly are washed with buff rather than ashy grey. The colour of the throat and the presence

versus the absence of the white spot are clearly alternative characters but it is doubtful is this is true of the colour of the flanks and belly because in one of the specimens of *obscura* the grey of these parts is invaded by an appreciable amount of buff and another specimen shows some slight



Diagrammatic sketch of the pattern of the fifth tail feather (left side and counting from the outside) in two males of *obscura* (A) and five of *pectardens* (B).

traces of it. Also the coloured plate in Berezowsky and Bianchi shows a bird with buff belly. It is possible that the colour of these parts is influenced by modifiers, inoperative for the other two characters. Other than these alternate characters the males of the two forms are identical or virtually so. They are perfectly identical in coloration and have a similar tail pattern (sketch). This pattern, as well as the measurements (table), show a certain degree of variation but this seems to be purely individual. Almost all the measurements are identical. The shape of the bill varies very slightly but this variation is barely discernible and again almost all specimens are identical. The wing formula and the proportions are the same.

The fact that the two forms differ only in alternate colour characters suggests to us that they are one species in which the males have a dimorphic breeding plumage. Instances of dimorphism are not rare in birds and have been discussed by Mayr and Stresemann (1950) in another genus of thrushes. In that genus (*Oenanthe*) the adult males of several species are dimorphic, and in other species are polymorphic. In *O. monticola* we also have two alternate characters, in one phase the crown is black and the belly white and in another phase the crown is white and the belly black. The black-throated phase in our birds is known so far only from the extreme eastern end of the range but it is possible, as in the case of the species studied by Mayr and Stresemann, that the dimorphism varies geographically. Other instances of geographically variable dimorphism have been discussed by Chapin (1947) in the bush-shrikes (*Chlorophoneus*).

Additional remarks. Goodwin has found that the unsexed specimen collected in January 1936 near Bhamo, and identified in Garthwaite and Ticehurst (1937) as being presumably a male of *obscura* in winter plumage is identical with specimens of *pectardens* from the Tsang po Valley in south-eastern Tibet in the same stage of plumage. The male collected by Koelz in the Garo Hills on 18th January is not available to us. This specimen was described by Koelz (1954, p. 12) as a new species which he

called *Luscinia daulias* but Vaurie, judging by the description, believes that there is very little doubt that it is also a first winter bird (*pectardens* phase).

We would like to express our appreciation to Drs. D. Amadon and E. Mayr for reading the manuscript and for their comments. The possibility that *pectardens* and *obscura* are colour phases had occurred independently to Mayr who raised this question in a letter to Vaurie when the present study was nearly completed.

MEASUREMENTS OF MALES

obscura phase	wing	bill	tarsus	tail
	72	16.8	26.5	51.5
	70	18.5	29	46+
	71	17	broken	46
	72	16.8	26.5	51.5
pectardens phase	wing	bill	tarsus	tail
	69.5	16	26	48
	70	17	27	49
	72	16	26	52
	73.5	17	broken	53
	70.5	16	26.5	52
	71	17	29	51
	71	17	28	48
	70	15	27	51
	71.5	16	28	broken
	69	17	27.5	51
	72	broken	26	53.5
	70	17	26.5	50

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Note on the genus *Pseudocossyphus* Sharpe

by MR. DEREK GOODWIN

Received 2nd May, 1956

Sharpe (1883) separated *Cossypha sharpei* Gray from the genus *Cossypha* and made it the type species of a new monotypic genus *Pseudocossyphus*. He did not enumerate the characters of the genus but from the key (p. 2) it would appear that the main differences were its shorter bill and shorter tail in relation to wing length. He remarked (p. 35) that the only other species of *Cossypha* from Madagascar, *C. imerina* Hartlaub, might prove referable to *Pseudocossyphus* but that he had seen no specimens. Delacour (1932) included both species in *Pseudocossyphus* without comment. Then Ripley (1952) returned these species to *Cossypha* but without giving definite morphological reasons for so doing. His remark that *Pseudocossyphus* "has a rather broad culmen and prominent rictal bristles" is applicable only to *P. sharpei*. It is likely that *P. sharpei* is, phylogenetically, closely related to *P. imerinus*—it has even (Sclater, 1930) been considered a race of it—but with its relatively long tail and bill and short rictal bristles it

hardly agrees with Sharpe's apparent conception of his genus *Pseudocossyphus*.

P. imerinus and *P. sharpei* do bear a general likeness to the African robin-chats of the genus *Cossypha*, but, in my opinion, their resemblance in colour and colour-pattern to the rock thrushes of the genus *Monticola* is far more striking. In colour *P. imerinus* could be well described as a pale version of *Monticola solitarius magnus* (La Touche) whilst *P.s. sharpei* and *P. sharpei erythronotus* (Lavauden) resemble, respectively *Monticola explorator* (Vieillot) and *M. rupestris* (Vieillot) even more closely. Milne-Edwards and Grandidier (1879) first referred to this probable affinity when they noted that the Madagascar species of *Cossypha* (*sic*) agreed with *Monticola* in being sexually dimorphic. Details of the pattern and the scale-like markings of the female plumage also emphasize this relationship. Possible points of difference are that *P.s. sharpei* has more prominent rictal bristles and a proportionately shorter bill than any rock thrush although not much shorter than that of *M. rufiventris* (Jardine and Selby). This feature is less marked in *P. sharpei erythronotus* and in *P. imerinus* the bill agrees with that of many *Monticola*. Both species are much smaller and have more rounded and shorter wings than most rock thrushes although *P.s. sharpei* comes quite close to *Monticola rupestris* in its wing and tail proportions and *P. imerinus* is as large as the Little Rock-thrush *Monticola rufocinerea* (Rüppel).

P. imerinus inhabits open coastal regions with some bushes and *P. sharpei* is a bird of the forest floor (Rand 1936). Although the rock-thrushes are typically birds of high altitude some of them are found in bushy or even forested country (Meinertzhagen 1951) and some occur at low altitudes in winter. Habitat differences do not, in my opinion, invalidate the probability of close relationship between *Pseudocossyphus* and *Monticola*. Insufficient has been recorded of the behaviour of *Pseudocossyphus* to be of help in this matter. The eggs of *P. sharpei* (the more *Cossypha*-like of the two) are pale blue, like those of *Monticola* and unlike those of *Cossypha*. Too much weight cannot, however, be given to this, as *Cossypha natalensis* A. Smith occasionally lays blue eggs and other robin-chats may possibly do so.

In conclusion it would seem, from present evidence, that *Pseudocossyphus* is more closely related to *Monticola* than to *Cossypha* or any other turdine genus. Future comparative studies of its anatomy and/or behaviour patterns may show that it should be submerged in *Monticola*. For the present, however, it seems best to retain the genus *Pseudocossyphus*, although the shorter wing is, as has been mentioned, the only feature that will differentiate both species of *Pseudocossyphus* from all *Monticola*.

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DINNERS AND MEETINGS FOR 1956

20th November, 18th December.

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If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

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The Committee have decided that in future the Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions up to 1,500 words on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

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The five hundred and fifty-first meeting was held at the Rembrandt Hotel, South Kensington, on Tuesday, 20th November, 1956, following a dinner at 6.30 p.m.

Chairman: Dr. James M. Harrison.

Members, 26; Guests, 2; Guest of the Club, Dr. A. McDiarmid; Total, 29.

Dr. A. McDiarmid, D.Sc., of the Agricultural Research Council Field Station at Compton, Berkshire, gave a most interesting lecture on "Some Diseases of Free-living Wild Birds," illustrated by lantern slides. His talk gave rise to a wide discussion in which Sir Landsborough Thomson, Sir Philip Manson-Bahr, Mr. John Beer, Mr. J. D. Macdonald, Dr. Jeffery Harrison and the Chairman took part.

Some Diseases of Free-living Wild Birds in Britain

by Dr. A. McDiarmid

The general attitude towards disease in free-living wild birds and mammals has altered greatly within the last twenty years. Originally it was thought that wild species were relatively free from infections, a state of affairs which could well be envied by a very unhealthy human population. This view has now been shown to be wrong; bird populations suffer from epidemics in much the same way as various other populations do and they can contract a variety of infections varying greatly in severity according to the causal agent. In certain countries, notably the U.S.A., much attention has been paid to this matter and it is perhaps unfortunate that Britain has lagged far behind in this particular field. Other countries even have research institutes devoted entirely to this subject, but so far our Nature Conservancy has shown little interest in diseases of wild animals apart from myxomatosis in rabbits and then, only from an ecological viewpoint. In this country, there is no-one employed whole time on a study of the problem of disease in wild life with perhaps one exception at the I.C.I. Game Research Station at Fordingbridge, where a considerable amount of useful work has been done by Dr. P. Clapham, especially on the helminths of game birds. It will be appreciated therefore that whatever has been accomplished in Britain has been essentially a part-time endeavour, often fitted in almost as a recreation from more serious work;

fortunately this pastime is becoming more popular, particularly with medical and veterinary men, who have certain facilities available for further examination of clinical material, consequently our knowledge of disease in wild life is gradually accumulating. The purpose of this paper is principally to describe some of the diseases encountered by the writer during the past ten years in Berkshire and to outline their possible significance from the veterinary and the public health angle.

Diseases Caused by Bacteria

Tuberculosis

Tuberculosis is comparatively common in wild birds. Personally I have now encountered it in wood pigeons, rooks, jackdaws, starlings, pheasants and partridges and cases have been recorded in other species. The incidence may be as high as 4 per cent in woodpigeons and starlings and about 1 per cent in rooks and jackdaws. Cases in game birds are rare and nearly always result from close contact with an infected broody hen during the rearing period. There is little doubt that in wood pigeons the disease is enzootic and is transmitted directly from the brooding pigeon to the squab—this is facilitated by the fact that 50 per cent of infected wood-pigeons have gross lesions in the alimentary tract and must readily contaminate the nest. At an early stage in our investigations it was realized that plumage change occurred in tuberculous wood pigeons, the affected bird being darker in colour and lacking the bloom of the normal bird—this was first noticed by the Hon. Miriam Rothschild, who collaborated with us in our early work on this subject. This change was reported in an early paper, McDiarmid (1948) and has recently been confirmed by Harrison and Harrison (1956), who have described these changes in greater detail. So far, no plumage change has been noticed in any other species of bird affected with tuberculosis apart from one partridge which appeared to me to be much lighter in colour than normal, but this may well be due to the lack of opportunity to study the feathers in detail and may even be masked by the original colour of the bird. In a total of over 50 cases of this disease in wood pigeons, only one bird has been found dead—the rest have been shot or found unable to fly. This confirms how difficult it is to acquire cases of disease in wild birds; predators invariably find the carcases before we do.

Tuberculosis in wild birds can be of considerable importance in farming practice. This spring, on a Berkshire farm, vast numbers of wood pigeons were observed feeding on a new ley. Despite constant shooting, the birds refused to leave the locality until they had practically stripped the field bare. Tuberculosis was detected in some of those birds. Some months later, avian tuberculosis was detected by the tuberculin test in eight sows which had been penned on this ley. This, of course, is purely circumstantial evidence but may serve to illustrate what actually can happen in practice. Needless to say the disease is also transmissible to domestic poultry and may also cause confusion in the interpretation of the tuberculin test in cattle—a very important point as we are at present using this test to eradicate tuberculosis from the dairy herds in Britain. Avian tuberculosis is fortunately extremely rare in humans but the possibility cannot be overlooked that infection could be acquired from handling infected wild birds. The disease in wood pigeons is recognized in the London markets

and the meat inspectors check the birds by an incision over the liver. If this organ shows "spots" the bird is discarded.

Cases of tuberculosis have been detected by various individuals in predatory species but these are rare, although, from the habits of hawks, one would expect them to have every opportunity of acquiring infection through selection of weakly birds as their prey.

Pseudotuberculosis

This disease can frequently be confused macroscopically with tuberculosis but bacteriological and histological methods readily differentiate between the two conditions. It is caused by *Pasteurella pseudotuberculosis* an organism which has hitherto been considered responsible mainly for disease in rodents. Cases have now been detected in wood pigeons, stockdoves, treesparrows, wrens and magpies in a limited area of Berkshire. From the species affected one wonders if the infection could have been acquired initially from the dreys of grey squirrels but so far we have heard of no records of the disease in squirrels in this country. From the public health aspect, it is recorded that the few human cases which have occurred have all proved fatal and the contamination of salad crops by birds is an obvious possibility which should perhaps be guarded against in those areas where there is a high carriage rate of the organism in wild life.

Paracolon infection

"Paracolon" organisms have been incriminated mainly as infective agents for human beings and in some instances in cold blooded animals but recently (McDiarmid, 1954) cases have been found in wood pigeons and partridges.

In the past, deaths in young partridges have often been attributed to B.W.D. (Bacillary White Diarrhoea) but personally I have yet to find an authentic case although many partridges have been searched systematically for the causal agent during the past ten years. I am inclined to think that the so-called B.W.D. cases in partridges (Fitzgerald, 1946) were probably "paracolon" infections. The macroscopic and microscopic lesions are identical in both diseases and as the causal agents of B.W.D. and paracolon infection are so alike it is possible that domestic poultry acquiring infection with paracolon organisms from wild birds, might well react to the B.W.D. agglutination test used in the poultry industry and be condemned unjustly as infected with that particular disease. Again the possibility of food poisoning in the human subject cannot be overlooked.

Air sac infection with Bacillus Pyocyaneus

Recently a considerable number of rooks, crows, jackdaws and starlings have been found affected with extensive lesions of the air sacs and lungs. These cases have been detected by the examination of birds caught in cagetraps on an estate in Berkshire and *B.pyocyaneus* has been demonstrated in most of them. The etiology of the condition is closely linked to this organism although, because of the findings in similar conditions in domestic poultry, other causal agents may also be involved.

Diseases Due to Fungi

The most important fungus responsible for disease in birds is *Aspergillus fumigatus*. Although a common disease in captive specimens it has rarely

been recorded in free-living specimens (McDiarmid, 1955). It is quite common in seabirds and is readily mistaken for tuberculosis in herring gulls—several specimens have been sent to my laboratory as cases of tuberculosis but invariably they have proved to be mycotic in origin.

Wood pigeons may show very extensive lesions of the viscera but the bird most commonly affected is the pheasant. On some estates the mortality may reach 30% before the cause of the disease is realised. I believe aspergillosis is a disease of comparatively recent introduction, being mainly associated with combined harvesting on a large scale—McDiarmid, (1952) the pheasants acquire the infection from scratching in fermenting heaps of damp weed seeds deposited in the coverts. These heaps soon become a mass of mycelia and spores and the birds receive a massive infection of the lungs and air sacs which rapidly proves fatal.

Actinomyces asteroides

This fungus has recently been found in a jackdaw which appeared quite healthy when caught in a cage trap on our estate. On further examination it was found to have lesions in the lungs and airsacs and the causal agent was readily cultivated from these sites. This fungus has been known to cause fatal encephalitis in humans. No doubt it will be demonstrated in many more species in due course.

Diseases Caused by Viruses

So far we have not had the opportunity or facilities to examine birds for these infective agents apart from pigeon pox which we have found in numerous wood pigeons, but it is perhaps worth pointing out that the incidence of psittacosis is high enough in the human population and the sources of this disease sufficiently obscure, to warrant further investigations as to carrier hosts of this virus in the wild bird population. The classic studies of Rasmussen (1938) on the outbreaks in juvenile fulmars on the Faroe Islands are perhaps a perfect illustration of what can be done in this field. Lesions simulating ornithosis have been observed in woodpigeons submitted to my laboratory but the virus has not been isolated. Ornithosis, which is a form of psittacosis, has however been detected in feral homer pigeons. Jennings, (1954) has also hinted at the possibility of an encephalitis in titmice in Britain which might well be due to a virus. Viral infections are of course common in wild birds in the U.S.A., Australia, Egypt and elsewhere and in many instances have been closely associated with the occurrence of encephalitis in the human and domestic animal population. It is quite conceivable that certain wild species might even act as reservoirs of polio virus. So far I am unaware of any survey having been made concerning possible carriers of this virus apart from the human population. Newcastle disease, an important virus infection of domestic poultry, has now been detected in British seabirds, Wilson, (1950), Blaxland (1951) and 'puffinosis' an interesting condition causing considerable mortality in Manx shearwaters and a variety of gulls, has also recently been shown to be caused by a virus. (Surrey Dane, 1948).

Diseases Due To Protozoa

In a general article such as this, it would be quite impossible to discuss the various protozoa recovered from wild birds and perhaps it would

suffice to say that this subject has hardly been touched upon in Britain since Cole's stimulating contribution in 1914. Opportunities are available and perhaps in due course we will see a well planned investigation in close collaboration with the Bird Ringing Centres, to study the incidence of diseases such as malaria in various species. Work along those lines is already proceeding in the U.S.A. Only a small quantity of blood is required and the birds are not harmed in any way. The intestinal protozoa such as coccidia are also in need of thorough investigation—little is known about their life histories and nothing at all about their individual host specificity. This is an excellent field for research and the information which it might yield would be of value to the poultry industry and game farmer, quite apart from the ornithologist. Trichomoniasis caused by *Trichomonas columbae* often occurs in woodpigeons but so far I have not seen this condition in any other species. The cheesy-like lesions on the edge of the bill are characteristic; probably many young squabs die from this condition in the nest. It has, on occasion, been confused with pigeon pox. Blackhead in partridges is worthy of mention. This disease, caused by *Histomonas meliagridis*, has been responsible for considerable mortality in certain partridge stocks during the past few seasons. It may, I think, be associated with the practice of allowing poultry free access to stubble fields. Extensive liver damage is usually present and the caeca are often considerably enlarged.

Diseases Due To Ectoparasites

Mortality in wild birds undoubtedly does occur as a result of severe infestation with certain ectoparasites. The sheeptick, *Ixodes recinius* can, if present in considerable numbers, kill young grouse and heavy louse infestation has been known to kill young game birds, such as pheasants. Quite recently I have found small partridges a few days old killed by massive mite infestation. These mites, which may be either forage acari or the true 'airsac' mite of poultry, cause blockage of the young birds' respiratory tract. The mites have also been observed in the lungs of adult pheasants.

Diseases Due To Helminths

It is difficult to say where normality ends and disease starts. An emaciated wood pigeon teeming with *Raillietina* is an easy case to diagnose but a young rook with *Syngamus trachealis* is quite a different proposition. Suffice to say that in May every young rook shows the presence of *Syngamus* in its trachea and yet they probably never die from this infestation. Pheasants however appear to be still highly susceptible whereas domestic poultry losses from those particular worms have diminished considerably in recent years. In our experience the carriage rate in the adult rook population is generally about 5 per cent. Cestodes appear to be the most prevalent worms in wood pigeons associated with actual disease and nematodes such as *Trichostrongyles* cause havoc in certain seasons in the grouse and partridge populations. Jackdaws frequently show large numbers of ascarids in their intestines but disease does not appear to be associated with the presence of these worms. Despite the trematodes found in a variety of gulls the balance between host and parasite is such that neither appears to suffer greatly from the association.

Tumours

Cancer, as we know it, is virtually absent from wild birds chiefly because of the short duration of life in most species. For example, I believe it is rare to find freeliving woodpigeons more than four years old. Exceptions do occur but these are few and far between. Apart from an epethelioma affecting the head of a grey partridge the only tumours I have seen are lymphomatosis in pheasants and partridges—this is a type of tumour common in poultry and in every case there was close association between the game birds and domestic hens.

From these remarks it will be realised that the problem of disease in free-living wild birds in Britain has, as yet, been hardly touched upon. Periodic mortality in certain species may well be associated with one or more of a variety of infective agents. The ecologist is, in my opinion, too often inclined to take the easy road and without due consideration of the disease aspect, attribute mortality and fluctuation in populations to such factors as availability of food, weather conditions and predation. Perhaps in the not too distant future we will see a fuller co-operation between ornithologists and ecologists on the one hand and bacteriologists, virologists and helminthologists on the other; those engaged on a study of bird behaviour might well detect variations in numbers of a certain species from time to time and by passing on this information to those able to investigate the mortality adequately might make a substantial contribution to our knowledge of epidemiology.

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Bird Casualties on Roads

Mr. Gerald Finnis read a paper on the above subject at the September meeting, an account of which follows:

When the number of bird casualties found on roads particularly during early summer made it almost possible for me to support a captive Little Owl, I decided to study this subject more carefully. Most of my records were obtained during cycle rides, when it is much easier to stop and collect corpses or make notes on smears indicating a fatality, although I also try to observe the behaviour of species when I am driving.

The following examples of road behaviour were cited: The weak flight of thrushes and blackbirds from low cover flanking roads without a path was a frequent cause of death and in one of his letters (27th June, 1923)

the late Col. T. E. Lawrence describes an incident when a thrush hit his side-car and he overturned the combination in a vain effort to avoid it. Blackbirds and robins are feeders in the leaf littler of roads during late autumn and winter and although the blackbird is often killed then, the robin generally manages to escape: its peak accident rate being later in the year. Thrushes, particularly during drought periods, hunt for snails in hedge banks and use the road as an anvil.

Grit is a necessity to many species and I have notes of house sparrows frequenting iron gratings from which snow had disappeared and where grit was exposed. A further example of this habit was illustrated during the winter of 1938 when a massive movement of larks crossed Kent and scores of birds alighted in the streets of towns to take grit before feeding in gardens and allotments. Mr. George Edwards in a broadcast talk referred to grit being taken by a winter roost of rooks before they passed on to forage in the fields. The carrion crow has also been observed swallowing grit on roads, but equally interesting is the rapidity with which carcases of diseased rabbits or road casualties in other mammals were dealt with by parties of foraging crows.

There do not appear to be any recent notes on nightjars behaving in this country as they do in other parts of the world where they become frequent road casualties. The correspondence relating to this behaviour being found in *The Ibis*, Vol. 96, Nos. 2 and 4, and Vol. 97, No. 2.

Other attractions the roads have for birds are obviously where drinking pools collect and soft mud patches (becoming increasingly rare) for *hirundines*.

Flying birds, even when not directly menaced by traffic, frequently twist and turn in panic and fly along a road for yards if they happen to be crossing a road when a car or a cyclist is beneath them. I have noticed this behaviour particularly in whitethroats and the goldfinch. Some birds also appear to leave their take-off too late and are run over (I once ran over a juvenile house sparrow in this way). I have received a notification of a wren being drawn on to the road and stunned by the air-flow of a passing car. This bird later recovered.

SUMMARY

TOTAL CASE HISTORIES. 274 OF 28 SPECIES

		♂	♀	Juvenile	
Sparrow	109	40	29	19	June/July
Blackbird	42	18	5	12	First 7 months
Song Thrush	38				May, June, July
Chaffinch	15	5	8		June
Greenfinch	13	8	4	1	June/July
Robin	8				July/August
Whitethroat	7				May/June
Starling	7			1	May/June
Lesser Whitethroat ...	6				May—on passage
Linnet	6				
Dunnock	5				
Blue Tit	3				
Swallow	2				
Great Tit	2				
Yellowhammer	2				

Single examples of the following have been found or reported: Bittern (Dr. J. M. Harrison, personal communication), pheasant, red necked phalarope (found on Brecon Beacons, personal communication, George Shannon), dunlin (this bird was found near Wrotham and had been ringed near Stavanger, J. Allen, personal communication), little owl, wood pigeon, house martin, wren, mistle-thrush, redwing, corn bunting, tree sparrow, budgerigar.

Dr. Jeffery Harrison said he had been struck by the apparent difference in the number of bird road casualties in this country and on the Continent, more casualties being found in this country. In two journies from Kent to Berkshire this summer, 83 miles distant, 55 birds had been found, made up of 42 house sparrows, 6 blackbirds, 3 song thrushes, 1 rook, 1 jay, 1 yellow bunting and a tame pigeon, the order of frequency corresponding closely with Mr. Finnis' findings. On a recent visit to France, only 4 casualties were found over 2,252 miles, in spite of a most careful watch. These were 2 house sparrows, a little and a long-eared owl. Mr. David Jones, who travelled 1,140 miles in France in August, found only 8. It seemed possible that the twisting British roads, often enclosed by hedges and carrying a heavy volume of traffic, were more lethal to bird life than the straighter, more open French roads, where traffic is lighter.

Another interesting factor is the widespread habit of birds to come on to the roads at dawn. This is reflected in the species killed and the commonest observed is the house sparrow, but the habit is marked in the thrushes, finches, yellow bunting, starling, robin, skylark, pied wagtail, rook and carrion crow. Fast motoring at this time kills many birds. Whether they are collecting grit or feeding is not determined as yet. Two house sparrows and a blackbird picked up soon after dawn contained grit, a blackbird and song thrush contained small beetles and earwigs and a house sparrow had corn.

Dr. Harrison mentioned crows as road casualties, killed as they fed on rabbits and hedgehogs. He also mentioned a snipe he had seen settle and get run over. It was found to be blind in one eye.

Lord Hurcomb wondered whether the different speeds in France and Britain was reflected in Dr. Harrison's figures and whether buzzards were finding a living from bird casualties. He also questioned the effect of headlights on birds.

James Fisher referred to a census made about 30 years ago and which would make an interesting comparison with the present time. He had also observed many birds on the roads soon after dawn and had run over a number himself. Although he thought some were getting grit, others he felt sure were there in order to keep their feet dry when there was a heavy dew in the fields. When studying rooks he had noticed that they arrived in the fields later on such mornings. He also mentioned a turkey buzzard and a great bustard as unusual road casualties.

Miss Longfield wondered if the differences in British and French figures were associated with a smaller bird population in France.

Some notes on Fox's Swamp Warbler *Calamocichla rufescens foxi* (Sclater)

by Capt. Charles R. S. Pitman

Received 30th June, 1956

I have followed Chapin, *Birds of the Belgian Congo*, 3, pp. 449-450, in regarding *foxi* as a race of the large swamp-warbler *Calamocichla rufescens* (Sharpe and Bouvier). M-Praed and Grant, however, *Birds of Eastern and North Eastern Africa*, 2, p. 379, agree with W. L. Sclater in according it specific rank *Calamocichla* (*Calamoecetor*) *foxi*.

First, I must draw attention to an unfortunate *lapsus calami* in M-Praed and Grant (*ibid.*) in regard to the type locality of *foxi* which they give as "Lake Maraye, Kivu district, eastern Belgian Congo," whereas W. Sclater when describing *C. foxi*, Bull. B.O.C. xlvii, 1927, pp. 118-119, records "Lake Maraye, Kigezi district, South-west Uganda," and this is correct. Jackson: *The Birds of Kenya Colony and the Uganda Protectorate*, 2, p. 1044, and Chapin (*ibid.*) refer correctly to the Kigezi district, as also do Grant and M-Praed, Bull. B.O.C. lxi, 1941, p. 40—in which paper *C. foxi* is treated as a species "as it lies within the area of *C. nilotica*" Neumann. M-Praed and Grant (*ibid.*) give the range of *C. foxi* in Eastern Africa as "South-western Uganda at Lake Mutanda to northern Ruanda and eastern Belgian Congo at Lake Maraye," but the last seven words are incorrect. The type specimen was collected by T. V. Fox, a Uganda District Officer, in the Kigezi district of S.W. Uganda. Lake Maraye, which is now known as Lake Mureyhe or Lake Muleyhe, and sometimes as Lake Muanga, is about two miles east of and a few feet higher than Lake Mutanda. According to Chapin (*ibid.*) the smaller *Calamocichla gracilirostris nuerensis* Lynes, which he records from Lake Albert at Butiaba and Kasenyi, is found at Kabare at the southern end of Lake Edward, while the larger *C.rufescens nilotica* occurs along the Upper Semliki (which is in the Lake Edward region) and in the Rutshuru valley (south of Lake Edward). *Nilotica* has been collected in the Mubuku valley in the western foothills of Ruwenzori, where I found it common in dense stands of elephant grass (*Pennisetum*), and it also occurs commonly under similar conditions along most other Uganda rivers flowing south-easterly from this mountain range. Grant and M-Praed were evidently unaware of the occurrence of *C. g. nuerensis* at the southern extremity of Lake Edward, as this overlaps the range of their *C.g.nilotica*. Chapin is justified in regarding the large and noisy *nilotica* as a race of *C.rufescens*. The contention that *C. foxi* "lies within the area of *C.nilotica*" and therefore must be regarded as a separate species is fallacious, as it overlooks the factor of altitude, for whereas the main Uganda habitat of *nilotica* is at an altitude of 3,000 feet or lower, that of *foxi* is at 6,000 to 6,400 feet. The Rutshuru river flows out of Lake Mutanda to reach eventually the south-eastern end of Lake Edward and it is by this river route a swamp warbler which has the same harsh voice as *C.rufescens* could have reached Lake Mutanda (thence to Lake Mureyhe), whence swamp routes give access to Lake Bunyonyi and thence to the Ruanda lakes and Lake Kivu—all high altitude waters. The range of the highland *foxi* is definitely outside that of the lower altitude *nilotica*, and the climatic conditions in the two habitats are very different.

The voice of the larger *C.rufescens* is very distinct from that of the smaller *C.gracilirostris* and this is a characteristic field diagnostic. That of the former cannot be described as a song, for it is a noisy, sustained chattering or churring, which Chapin, p. 447, aptly describes as a "'loud, guttural 'churr' or extend it to a series of resonant syllables. . . . These have a gurgling, brassy quality which is most distinctive"; that of the latter is pitched higher and is more of a squeaky song. The harsh chattering of *foxi* in the papyrus and *Phragmites* fringe of Lakes Mutanda and Mureyhe —and to a lesser extent at the northern end of Lake Bunyonyi—was a familiar sound in the course of the many visits I made to these regions. It was always very noisy, particularly in the early morning and late afternoon, around Lakes Mutanda and Mureyhe in the five months —December to March—during which the visits were made, and it creeps through the *Phragmites* rather than the papyrus.

Chapin (*in litt.* 15th April, 1954, and 26th January, 1956) has collected *C.rufescens* from Tshibati Farm (6,400 feet) 2° 14′ S.: 28° 47′ E. to the south-west of Lake Kivu (4,789 feet). His specimens were obtained in dense elephant grass where they were very hard to see and even harder to find if shot. He writes with reference to *foxi* "'This race lives not within the range of *C.r.nilotica*, but just to the east of it, in a highland area, and on the fringe of the range of the whole species. There is no barrier between the areas occupied by *nilotica* and *foxi* because this species of warbler inhabits any dense stand of *Pennisetum purpureum* as well as papyrus, and the *Pennisetum* grass grows anywhere between the level of Lake Edward and the highlands of Kivu and Kigezi up to 7,000 feet.

Up here at Tshibati we live with *Calamocichla rufescens* in the elephant grass all about the farm, even within 100 yards of our house, and hear it "'gurgling'' all through the year, though less often in the dry season of July-August. We have no papyrus here, and have found a couple of nests placed on tall stalks of *Pennisetum* where a side shoot furnished the necessary support. One nest, 27th February, 1954, contained a fledgling *Chrysococcyx klaasi*, the other 11th January, 1954, had one egg which disappeared shortly after the nest was found.

I am now satisfied that the race here at Tshibati is *foxi*. Only eight specimens have been collected (four of each sex), and two of the males have wing-tips and tails so worn that their measurements are useless. But the measurements as a whole are those of the large *foxi*. . . .

A race of *Calamocichla gracilirostris* lives along the western shore of Lake Kivu, and we have heard it singing at Katana, but it does not come up in the near-by highlands . . . its voice is always sweeter, never so brassy, as that of *rufescens*.'' On 31st July, 1956, Chapin again wrote to inform me that the range of *foxi* "'appears to range south to the marshes of the Akanyaru, some distance south of Astrida, on the boundary of Urundi.''

At the north end of Lake Mutanda, which I investigated frequently, and at Lake Mureyhe, I found *foxi* plentiful but a great skulker and exceedingly difficult to collect as one usually saw it at a distance of a few feet when it would have disintegrated to a .410 charge. Several were shot but only one was recovered.

Most of the nests I have found were placed in the centre of the inflorescence of a papyrus head, exactly as depicted by Chapin, p. 448, for

C.r.nilotica; the measurements of a set of three eggs of this race he gives as 20.3–21.2 mm. x 15.1–15.5 mm. and their colour "white, finely specked with brown and more coarsely spotted with dark brown, the larger markings most abundant around the blunt end."

The nest and eggs of *C.r.foxi* have not previously been described. I found three nests with eggs in the latter half of March. All the nests were solidly built of broad, dry and dead reed blades, thickly lined with fine, dry, shredded grasses, or the dry, fine stems of papyrus plumes. Typically reed-warblerlike, compact and with a neat deep cup, almost as deep as the average inside diameter of 2½ inches. They were usually some 5 feet above the water level and in the papyrus heads, but one was firmly bound to three *Phragmites* stems. One egg was fresh and could not be left to await others as I was on the move; it measured 22.3 x 15.5 mm. The parent was seen at the nest. The other two eggs, also singles, were infertile, but there is no doubt about their identity as the nests were typical, the eggs resembled the fresh one and no other large species of swamp warbler occurs on Lake Mutanda. The distinctive eggs are dull or dirty grey-white with a few umber spots superimposed on a cloudy cap of grey and grey-black suffusion and spots, or boldly spotted brown and light brown on dull slaty the markings mainly at the larger end and the underlying slaty marks preponderating. The two infertile eggs are each of abnormal shape and measure respectively 25.2 x 15.2 mm. (rather elongate) and 22.3 x 13.6 mm. (very narrow). Dozens of hours were spent from time to time in fruitless search for occupied nests in the papyrus and *Phragmites* fringe. Many old nests were found, but the real breeding season was never determined, it certainly was not in March, nor in the other months previously mentioned, and is presumably in the August-November period.

Both Dr. J. P. Chapin and Capt. C. H. B. Grant have kindly read through this, though the latter does not approve my taxonomic defection.

Notes on the Systematics of African Bulbuls

by Mr. C. M. N. White

Received 30th April, 1956

1. The relationships within the genus *Pycnonotus*

Although *P.capensis* (Linne) is best treated as a separate species, it is by no means certain that *P.nigricans* (Vieillot) is really specifically distinct from the other African bulbuls often combined as races of *P.barbatus*. In a series from South West Angola in the British Museum, although most are noted as having had the yellow eye ring of *P.nigricans* there are others collected at Benguella town and Catumbella which are noted as having had a greenish black eye ring. Two of them are also a little browner on the crown than the blackish crowned *nigricans*. I strongly suspect that these birds are the product of *P.b.tricolor* meeting *P.nigricans*, but only more data and field study can elucidate this. In the meantime I leave *P.nigricans* as a species.

All the other African bulbuls are races of *P.barbatus*. The relationship between the various proposed subspecies can be most easily examined by dividing the variations into three categories. Firstly, the well marked

forms, *inornatus*, *arsinoe*, *schoanus*, *dodsoni*, *tricolor* and *layardi*. These exhibit the important variable characters, colour of under tail coverts, crown and head; presence or absence of white spot on side of neck, and plain or mottled breast pattern. I call these six forms the primary variations and some of them are still treated by some ornithologists as distinct species. They are linked by a series of populations exhibiting intermediate characters.

Of these intermediates *P.b.gabonensis* which links *inornatus* (white under tail coverts) to *tricolor* (yellow under tail coverts) is the only intermediate population which shows a mixture of these colours, the under tail coverts being otherwise deep yellow or white. *P.b.gabonensis* has pale sulphur under tail coverts. *P.b.somaliensis* is a perfect link between *schoanus* and *dodsoni*; it has white under tail coverts like *schoanus* but the rest of its pattern is more like *dodsoni*; it likewise has a relatively small range.

P.b.dodsoni appears to have extended its range south in fairly recent times with two rather striking results. On the southern edge of the Ethiopian highlands a bird very like *schoanus* but with yellow (not white) under tail coverts is *P.b.spurius*. It is the product of *P.b.schoanus* and *P.b.tricolor* or *P.b.layardi* but is now isolated from the latter by the occurrence of *P.b.dodsoni* in northern Kenya and south Ethiopia. Secondly where *P.b.dodsoni* meets the black and brown headed populations of more southern type in Kenya and north-east Tanganyika, no very well marked intermediate population exists and the extremes therefore appear to approach each other very closely and almost look like good species. But some *dodsoni* from these areas show unmistakeable signs of gene flow in reduction of the mottled pattern of their back and breast, and great reduction of the white spot on the side of the neck. Such birds have been named *littoralis* and *chyuluensis* by van Someren but the range of such intermediates is difficult to define and to some extent discontinuous which makes their recognition even as an intermediate subspecies very unsatisfactory. Finally, brown headed *tricolor* and black headed *layardi* have a zone linking them inhabited by birds with very dark brown heads; these have been called *ngamii* and *fayi*. The zone of these intermediates varies in width; at first it appeared that *ngamii* might be used for birds from north Bechuanaland, whilst in Northern Rhodesia *tricolor* and *layardi* replaced each other almost without intergrades. However intergrades do occur; in a series from Namwala most are as black headed as *layardi*, but some are like *ngamii*. Many birds from the Zambesi valley in Barotseland also seem rather dark brown for *tricolor*; in a similar way I have seen very dark birds where *tricolor* and *layardi* meet in the north-east of Northern Rhodesia at Isoka and in southern Tanganyika at Mpanda.

Probably no bird in Africa has a more completely continuous range than *P.barbatus*, for it occurs in very arid country in Somalia and the Sudan and in very well timbered country including a more or less continuous range across the Congo basin wherever there are clearings. I feel therefore that to give the same taxonomic status to these intergrading hybrid populations as to the primary variations is biologically misleading. It conceals their character as well as their variable degree of stability. I consider that these races should in future be expressed as *P.b.tricolor* × *P.b.layardi* rather than as *P.b.ngamii*, and so on.

The third type of variation is clinal within the six primary subspecies

which I discussed above. Of these *arsinoe*, *schoanus* and *dodsoni* do not show any defined clinal variation.

Both *tricolor* and *layardi* exhibit identical clines, being lighter on the chest in the north of their ranges due to the greater extent of white extending upwards from the abdomen as well as to the actually paler colour of the grey brown breast, and more pronounced light fringes to the breast feathers. Failure to notice this has resulted in great inconsistency among some writers who recognize one and not the other of these variations by name. Both or neither should be recognized; only the extremes of the ranges of both *tricolor* and *layardi* are readily separable, and the area of intergrades not readily identifiable is greater than the area of the extremes, which casts some doubt upon the usefulness of giving names to the extremes. The intergrades *fayi* and *ngamii* show exactly the same differences from one another as the northern and southern extremes of *tricolor* and *layardi*.

The clinal variation in West Africa is least easy to treat. It is partly a question of dark and light general colour, but this seems not to be correlated with humidity for birds from Liberia and the Ivory Coast are the lightest of all, birds from the Gold Coast (typical *inornatus*) are darker and Nigerian birds (*nigeriae*) are darkest. The inland populations have the upperside as light as birds from Liberia and the Ivory Coast but have darker crowns; I cannot see much difference in birds from Senegal to Lake Chad, though the latter would be *P.b.goodi* Rand. They may represent a slight trend towards *arsinoe* as Rand suggests but I find them just like others from Senegal.

Actually they are capable of an alternative explanation. Near the coast all these bulbuls are more or less uniform in colour with crown little or no darker than mantle; the whole upper surface darkens from the pale birds of Liberia through slightly darker birds in the Gold Coast to the darkest birds in Nigeria; the inland birds from Senegal to Lake Chad are pale on the mantle like birds from Liberia but have darker heads and in this respect could be regarded as being intermediate between *inornatus* and *nigeriae*. Since the cline in the latter two is geographic from west to east but not linked to humidity, it is probably most satisfactory to regard *goodi* as such an intermediate in characters.

I am greatly indebted to Mr. R. E. Moreau, who looked at these bulbuls with me, and agrees with me on the need for a taxonomic treatment which emphasizes the hybrid characters of the secondary "subspecies"; and to Mrs. B. P. Hall, who drew my attention to the variation in the eye rings of *P.nigricans*.

2. The range and variation in *Andropadus ansorgei* Hartert

The British Museum has a series of nine of the nominate race from Owerri; seven others from Cameroons to Upper Congo are on average less rusty, and rather colder and greyer but the differences are hardly constant enough to justify the recognition of *A.a.muniensis* Grote, especially as this trend is only a cline to the extreme *A.a.kavirondensis* (van Someren) in western Kenya. *A.ansorgei* also occurs in Sierra Leone, for there are two hitherto unrecorded specimens from York Pass and Bintumane peak in the British Museum. They agree better with birds from the upper Congo than with those from Owerri in their cold and greyish

undersides. This seems an additional reason for not recognizing *A.a. muniensis*, since to do so will necessitate naming a race in upper Guinea which cannot as yet be defined.

3. Sibling species in *Criniger*

Chapin (*Auk* 1948, p. 444) pointed out that there were two very similar bulbuls in the Congo; the bird with a thick bill and olive brown tail he called *C.calurus emini* Chapin; the thin billed bird with a reddish tail he called *C.c.ndussumensis* Reichenow. He then believed that they were conspecific although years before Gyldenstolpe had suggested that there were two species and renamed the thin billed bird *C.bannermani*. Now Berlioz (*Bull.Mus.Nat.Hist.Nat.Paris* 1955, p. 189) has pointed out that in Gaboon birds with both types of bill occur together, although there the tail colour is reddish in both. He suggests that the small billed bird should be called *C.swainsoni* Neumann (1914 Sierra Leone). However the type of *swainsoni* is in the British Museum and is like *C.verreauxi* Sharpe, of which it has been regarded as a synonym; it cannot be used for the thin billed bird, since both *verreauxi* and *swainsoni* are based on the large billed bird of upper Guinea.

A careful comparison of the thick and thin billed birds in the Congo basin reveals some slight colour differences; the thin billed birds differ from the thick billed in having a little more melanin in their plumage, making them a trifle more dusky green on the breast and flanks; similarly their under tail coverts are more buffy, less clear yellow; also they have a grey white anteocular spot not obvious in the thick billed bird. I cannot see much difference in the feet despite what Berlioz has written on this. Now Mrs. Hall has pointed out to me that *C.olivaceus* of upper Guinea has a small bill like the thin billed birds of lower Guinea; it has a green (not grey) crown and a yellowish anteocular spot. I have no doubt that the oldest name for the thin billed bird is *C.olivaceus* (Swainson); since the thin billed bird of lower Guinea seems identical from Owerri to the Semliki, all must be called *C.o.ndussumensis* at present pending the determination of the type of Cassin's *C.calurus* which is at present used for the large billed bird*. *C.olivaceus* and *C.calurus* will then be the specific names of the two species; in upper Guinea the two species are easily distinguished by head colour; in lower Guinea from south-east Nigeria to the Congo mouth they are extraordinarily alike apart from bill and anteocular spot; further east still from the middle Congo to the Semliki they again are separable on tail colour.

The examination of the type of *ndussumensis* is desirable to confirm that the name has been correctly used; otherwise I believe that the two sibling species are as set out as above, Berlioz being quite correct in his contention about the birds from Gaboon being two seperate species.

Note on *Ploceus Reichardi* Reichenow

by Mr. J. S. S. Beesley

Received 21st June, 1956

In the *Birds of Eastern and North-eastern Africa*, vol. 2, p. 895, 1955, Mackworth-Praed and Grant note that very little is recorded on the habits

*Comparison has since been made for me at Philadelphia. The type of *C.calurus* is large billed.

etc., of this weaver. This weaver breeds in the Rukwa Valley, south-western Tanganyika Territory, in January and February. The nests, which are kidney-shaped with the entrance-hole underneath, are made of grass and suspended in Ambatch bushes (*Sesbania* sp.) about 6 to 9 feet above ground level in swampy areas on the plains. Apparently, the nests are not lined.

Nesting is in colonies of from four to fifteen and 150, the nests being separated by about a yard. Only one egg was found in a nest, but this may not be the full clutch. Eggs are either pale olive colour densely covered with faint brown markings, or pale greenish-blue more sparsely spotted and blotched with brown and measure 19.5 x 13, 20 x 13.5, 20 x 14 and 21 x 14.5 mm. There is considerable chattering at the nesting site and from individuals feeding in the long grass. The song is an unmusical mixture of chirps, twitterings and chattering. Occasionally a coarse high trill is uttered, also a grasshopper-like churring of short duration (one to two seconds). There is also a warbler-like low click. The food is mainly grass seeds and, in the evening, feeding takes place in the long grass under the Acacia trees on the edge of the plains. When I visited the nesting sites in the third week in February, the birds had all gone and the elephants had trampled the *Sesbania* and nests underfoot.

It should be remarked that the natives plunder the nests, even to cutting down the trees, to take nestlings for food.

On *Barbatula bocagei* Sousa, Jorn. Ac. Real. Sci. Lisboa, 11, p. 158, 1886: Caconda, Angola

by Captain C. H. B. Grant and Mr. C. W. Mackworth-Praed

Received 12th May, 1956

Through the kindness of the authorities of the Museum Bocage, Lisbon, and of the British Museum (Natural History), we have been enabled to examine the type of this bird. It is a young bird, not yet able to fly, of *Lybius torquatus* Dumont. It has been skinned from spirit, and so the description of the white eye-stripe, sides of face and throat are due to the red colour having disappeared, as is always the case in spirit specimens.

Our measurements of this young bird are: Wing 70, bill 20, tail 35, tarsus 20 mm. *Barbatula bocagei* Sousa, therefore becomes a synonym of *Lybius torquatus* Dumont, 1816.

African Swifts

by Captain C. H. B. Grant and Mr. C. W. Mackworth-Praed

Received 2nd August, 1956

In the *Ibis*, p. 34, 1956, Dr. Lack in "The Species of *Apus*," has raised two points that we should like to criticize: On p. 39 he considers that *Apus horus* Heuglin, and *Apus toulsoni* Bocage, are conspecific.

Surely such distinguishing characters as a white and black rump are specific, despite the fact that otherwise the general characters agree. We consider that *A.horus* and *A.toulsoni* should be treated as different species.

On p. 43 he considers that *A.myoptilus* Salvadori, and *A.poensis* Alexander, should be treated as conspecific with perhaps also *A.batesi*

Sharpe. Apart from colour differences *A.poensis* differs from *A.myoptilus* in the tail which is by no means so deeply forked nor are the outer feathers so narrow and pointed. *A.batesi*, as Dr. Lack has said on p. 44, "differs conspicuously from *A.myoptilus* in being a glossy blue-black," and the outer tail feathers are not the same.

We maintain our opinion that *A.poensis*, *A.myoptilus* and *A.batesi* are three different species and that the first (*A.poensis*) should be left as a race of *A.unicolor* Jardine.

A New Race of Swallow from Somaliland

by Mr. C. M. N. White

Received 3rd June, 1956

Amadon (*Amer.Mus.* Nov. No. 1656, 1954, p. 3) separated *Hirundo aethiopica fulvipectus* as a western race of *H.aethiopica*. A recent examination of the material in the British Museum including the type of *aethiopica* and seven others from Ethiopia shows that the nominate form is like birds from the Sudan and Nigeria in having buff from chin to breast; I cannot separate these typical *aethiopica* from a long series from the range of *fulvipectus* Amadon, nor do nominate birds exhibit the characters ascribed to them by Amadon. These characters are, however, well shown in birds from Somalia, and this race needs a name.

Hirundo aethiopica amadoni subsp.nov.

Description: Differs from nominate *aethiopica* in having the throat and breast white, only the chin being slightly tinged with buff.

Type: adult male collected at Geloher, Somaliland on 17th March, 1919, by Col. Stephenson Clarke. B.M. Reg. No. 1923.8.7.4014.

Range: British Somaliland to N.E. Kenya as far as Lamu.

Eight examined.

I am indebted to Mrs. B. P. Hall for finding time to examine these swallows with me.

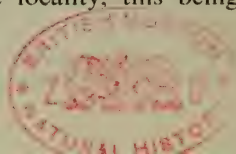
On the type locality of *Lybius dubius* (Gmelin)

by Captain C. H. B. Grant and Mr. C. W. Mackworth-Praed

Received 8th May, 1956

Gmelin, and all other authors, have given "Coasts of Barbary" as the type locality of this species, and we cannot find that any author has suggested a better locality.

Barbary is confined to the northern part of Africa, west of Egypt to the Atlantic and north of the Sahara. This species is not found north of the French Sudan and it may have been taken to the Barbary coast by the old trade routes across the Sahara either alive or as a skin. As it is now known not to occur anywhere north of the Sahara we would propose Mopti, Niger River, French Sudan, as the type locality, this being the most northern locality where the bird occurs.



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DINNERS AND MEETINGS FOR 1956

18th December.

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